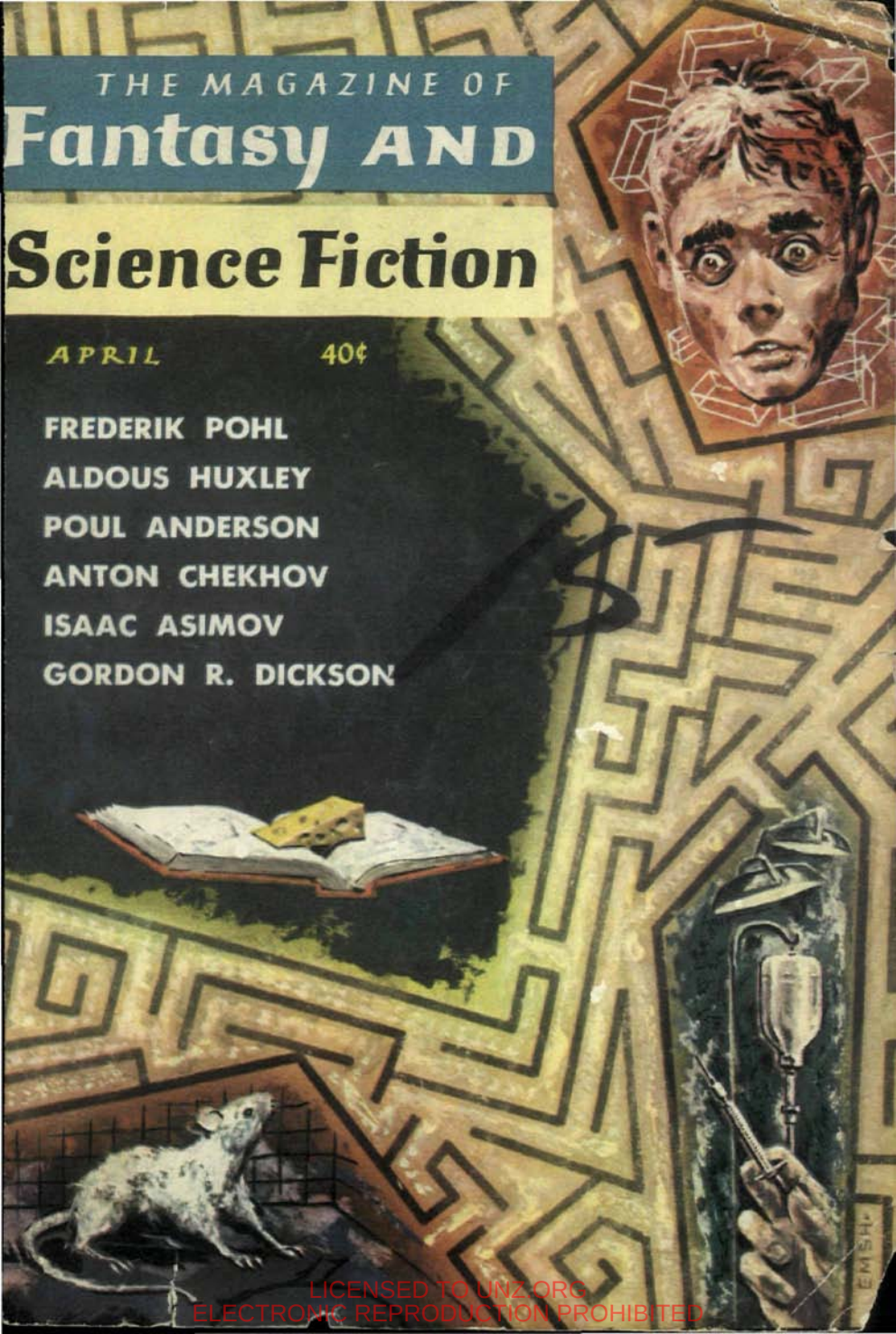
THE MAGAZINE OF

Fantasy AND Science Fiction

APRIL 40¢

FREDERIK POHL
ALDOUS HUXLEY
POUL ANDERSON
ANTON CHEKHOV
ISAAC ASIMOV
GORDON R. DICKSON



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THE MAGAZINE OF

Fantasy and Science Fiction

VOLUME 16, No. 4 APRIL

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Cover by Emsh, illustrating "Flowers for Algernon"

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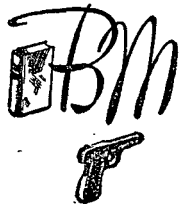

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Homo Superior has appeared in science fiction rather more frequently than Homo Inferior—which is hardly surprising in a field devoted to extrapolation. Daniel Keyes, who has been a seaman, briefly a science fiction editor, and an English teacher, proves himself a Writer Superior in the following poignant and curiously suspenseful story of Charlie Gordon, who has an I.Q. of 68, and a tremendous will to triple it.

Flowers For Algernon

by Daniel Keyes

progris riport 1—martch 5 1965

Dr. Strauss says I shud rite down what I think and evrey thing that happins to me from now on. I dont know why but he says its importint so they will see if they will use me. I hope they use me. Miss Kinnian says maybe they can make me smart. I want to be smart. My name is Charlie Gordon. I am 37 years old and 2 weeks ago was my brithday. I have nuthing more to rite now so I will close for today.

progris riport 2—martch 6

I had a test today. I think I faled it. and I think that maybe now they wont use me. What happind is a nice young man was in the room and he had some white cards with ink spillled all over them. He sed Charlie what do you see on this card. I was very skared even tho I had my rabits foot in my pockit because when I was a kid I always faled tests in school and I spillled ink to.

I told him I saw a inkblot. He said yes and it made me feel good. I thot that was all but when I got up to go he stopped me. He said now sit down Charlie we are not thru yet. Then I dont remember so good but he wantid me to say what was in the ink. I dint see nuthing in the ink but he said there was picturs there other pepul saw some picturs. I coudnt see any picturs. I reely tryed to see. I held the card close up and then far away. Then I said if I had my glases I coud see better I usally only ware my glases in the movies or TV but I said they are in the closit in the hall. I got them. Then I said let me see that card agen I bet Ill find it now.

I tryed hard but I still coudnt find the picturs I only saw the ink.

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I told him maybe I need new glases. He rote somthing down on a paper and I got skared of faling the test. I told him it was a very nice inkblot with littel points all around the eges. He looked very sad so that wasnt it. I said please let me try agen. Ill get it in a few minits becaus Im not so fast somtimes. Im a slow reeder too in Miss Kinnians class for slow adults but I'm trying very hard.

He gave me a chance with another card that had 2 kinds of ink spillled on it red and blue.

He was very nice and talked slow like Miss Kinnian does and he explaned it to me that it was a *raw shok*. He said pepul see things in the ink. I said show me where. He said think. I told him I think a inkblot but that wasnt rite eather. He said what does it remind you—pretend somthing. I closd my eyes for a long time to pretend. I told him I pretned a fowntan pen with ink leeking all over a table cloth. Then he got up and went out.

I dont think I passd the *raw shok* test.

progris report 3—martch 7

Dr Strauss and Dr Nemur say it dont matter about the inkblots. I told them I dint spill the ink on the cards and I coudnt see anything in the ink. They said that maybe they will still use me. I said Miss Kinnian never gave me tests like that one only spelling and reading. They said Miss Kinnian told that I was her bestist pupil in the adult nite scool becaus I tryed the hardist and I reely wantid to lern. They said how come you went to the adult nite scool all by yourself Charlie. How did you find it. I said I askd pepul and sumbody told me where I shud go to lern to read and spell good. They said why did you want to. I told them becaus all my life I wantid to be smart and not dumb. But its very hard to be smart. They said you know it will probly be tempirery. I said yes. Miss Kinnian told me. I dont care if it herts.

Later I had more crazy tests today. The nice lady who gave it me told me the name and I asked her how do you spellit so I can rite it in my progris riport. THEMATIC APPERCEPTION TEST. I dont know the frist 2 words but I know what *test* means. You got to pass it or you get bad marks. This test lookd easy becaus I coud see the picturs. Only this time she dint want me to tell her the picturs. That mixd me up. I said the man yesterday said I shoud tell him what I saw in the ink she said that dont make no difrence. She said make up storys about the pepul in the picturs.

I told her how can you tell storys about pepul you never met. I said why shud I make up lies. I never tell lies any more becaus I always get caut.

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She told me this test and the other one the raw-shok was for getting personalty. I laffed so hard. I said how can you get that thing from inkblots and fotos. She got sore and put her picturs away. I dont care. It was sily. I gess I faled that test too.

Later some men in white coats took me to a difernt part of the hospitil and gave me a game to play. It was like a race with a white mouse. They called the mouse Algernon. Algernon was in a box with a lot of twists and turns like all kinds of walls and they gave me a pencil and a paper with lines and lots of boxes. On one side it said START and on the other end it said FINISH. They said it was *amazed* and that Algernon and me had the same *amazed* to do. I dint see how we could have the same *amazed* if Algernon had a box and I had a paper but I dint say nothing. Anyway there wasnt time because the race started.

One of the men had a watch he was trying to hide so I woudnt see it so I tryed not to look and that made me nervus.

Anyway that test made me feel worser than all the others because they did it over 10 times with difernt *amazeds* and Algernon won every time. I dint know that mice were so smart. Maybe thats because Algernon is a white mouse. Maybe white mice are smarter then other mice.

progris riport 4—Mar 8

Their going to use me! Im so exited I can hardly write. Dr Nemur and Dr Strauss had a argament about it first. Dr Nemur was in the office when Dr Strauss brot me in. Dr Nemur was worryed about using me but Dr Strauss told him Miss Kinnian rekemmended me the best from all the people who she was teaching. I like Miss Kinnian becaus shes a very smart teacher. And she said Charlie your going to have a second chance. If you volenteer for this experament you mite get smart. They dont know if it will be perminint but theirs a chance. Thats why I said ok even when I was scared because she said it was an operashun. She said dont be scared Charlie you done so much with so little I think you deserv it most of all.

So I got scaird when Dr Nemur and Dr Strauss argud about it. Dr Strauss said I had something that was very good. He said I had a good *motor-vation*. I never even knew I had that. I felt proud when he said that not every body with an eye-q of 68 had that thing. I dont know what it is or where I got it but he said Algernon had it too. Algernons *motor-vation* is the cheese they put in his box. But it cant be that because I didnt eat any cheese this week.

Then he told Dr Nemur something I dint understand so while

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they were talking I wrote down some of the words.

He said Dr Nemur I know Charlie is not what you had in mind as the first of your new brede of intelek** (coudnt get the word) superman. But most people of his low ment** are host** and uncoop** they are usualy dull apath** and hard to reach. He has a good natcher hes intristed and eager to please.

Dr Nemur said remember he will be the first human beeng ever to have his intelijence trippled by surgicle meens.

Dr Strauss said exakly. Look at how well hes lerned to read and write for his low mentel age its as grate an acheve** as you and I lerning einstines therey of **vity without help. That shows the intenss motor-vation. Its comparat** a tremen** achev** I say we use Charlie.

I dint get all the words and they were talking to fast but it sounded like Dr Strauss was on my side and like the other one wasnt.

Then Dr Nemur nodded he said all right maybe your right. We will use Charlie. When he said that I got so exited I jumped up and shook his hand for being so good to me. I told him thank you doc you wont be sorry for giving me a second chance. And I mean it like I told him. After the operashun Im gonna try to be smart. Im gonna try awful hard.

progris ript 5—Mar 10

Im skared. Lots of people who work here and the nurses and the people who gave me the tests came to bring me candy and wish me luck. I hope I have luck. I got my rabits foot and my lucky penny and my horse shoe. Only a black cat crossed me when I was comming to the hospitil. Dr Strauss says dont be supersitis Charlie this is sience. Anyway Im keeping my rabits foot with me.

I asked Dr Strauss if Ill beat Algernon in the race after the operashun and he said maybe. If the operashun works Ill show that mouse I can be as smart as he is. Maybe smarter. Then Ill be abel to read better and spell the words good and know lots of things and be like other people. I want to be smart like other people. If it works perminint they will make everybody smart all over the wurld.

They dint give me anything to eat this morning. I dont know what that eating has to do with getting smart. Im very hungry and Dr Nemur took away my box of candy. That Dr Nemur is a grouch. Dr Strauss says I can have it back after the operashun. You cant eat befor a operashun . . .

Progress Report 6—Mar 15

The operashun dint hurt. He did it while I was sleeping. They took off the bandijis from my eyes and my head today so I can make

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a PROGRESS REPORT. Dr Nemur who looked at some of my other ones says I spell PROGRESS wrong and he told me how to spell it and REPORT too. I got to try and remember that.

I have a very bad memary for spelling. Dr Strauss says its ok to tell about all the things that happin to me but he says I shoud tell more about what I feel and what I think. When I told him I dont know how to think he said try. All the time when the bandijis were on my eyes I tryed to think. Nothing happened. I dont know what to think about. Maybe if I ask him he will tell me how I can think now that Im suppose to get smart. What do smart people think about. Fancy things I suppose. I wish I knew some fancy things alredy.

Progress Report 7—mar 19

Nothing is happining. I had lots of tests and different kinds of races with Algernon. I hate that mouse. He always beats me. Dr Strauss said I got to play those games. And he said some time I got to take those tests over again. Thse inkblots are stupid. And those pictures are stupid too. I like to draw a picture of a man and a woman but I wont make up lies about people.

I got a headache from trying to think so much. I thot Dr Strauss was my frend but he dont help me. He dont tell me what to think or when Ill get smart. Miss Kinnian dint come to see me. I think writing these progress reports are stupid too.

Progress Report 8—Mar 23

Im going back to work at the factery. They said it was better I shud go back to work but I cant tell anyone what the operashun was for and I have to come to the hospitil for an hour evry night after work. They are gonna pay me mony every month for lerning to be smart.

Im glad Im going back to work because I miss my job and all my frends and all the fun we have there.

Dr Strauss says I shud keep writing things down but I dont have to do it every day just when I think of something or something speshul happins. He says dont get discoridged because it takes time and it happins slow. He says it took a long time with Algernon before he got 3 times smarter then he was before. Thats why Algernon beats me all the time because he had that operashun too. That makes me feel better. I coud probly do that *amazed* faster than a reglar mouse. Maybe some day Ill beat Algernon. Boy that would be something. So far Algernon looks like he mite be smart perminent.

Mar 25 (I dont have to write PROGRESS REPORT on top any

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more just when I hand it in once a week for Dr Nemur to read. I just have to put the date on. That saves time)

We had a lot of fun at the factery today. Joe Carp said hey look where Charlie had his operashun what did they do Charlie put some brains in. I was going to tell him but I remembered Dr Strauss said no. Then Frank Reilly said what did you do Charlie forget your key and open your door the hard way. That made me laff. Their really my friends and they like me.

Sometimes somebody will say hey look at Joe or Frank or George he really pulled a Charlie Gordon. I dont know why they say that but they always laff. This morning Amos Borg who is the 4 man at Donnegans used my name when he shouted at Ernie the office boy. Ernie lost a packige. He said Ernie for godsake what are you trying to be a Charlie Gordon. I dont understand why he said that. I never lost any packiges.

Mar 28 Dr Straus came to my room tonight to see why I dint come in like I was suppose to. I told him I dont like to race with Algernon any more. He said I dont have to for a while but I shud come in. He had a present for me only it wasnt a present but just for lend. I thot it was a little television but it wasnt. He said I got to turn it on when I go to sleep. I said your kidding why shud I turn it on when Im going to sleep. Who ever herd of a thing like that. But he said if I want to get smart I got to do what he says. I told him I dint think I was going to get smart and he put his hand on my sholder and said Charlie you dont know it yet but your getting smarter all the time. You wont notice for a while. I think he was just being nice to make me feel good because I dont look any smarter.

Oh yes I almost forgot. I asked him when I can go back to the class at Miss Kinnians school. He said I wont go their. He said that soon Miss Kinnian will come to the hospitil to start and teach me speshul. I was mad at her for not comming to see me when I got the operashun but I like her so maybe we will be frends again.

Mar 29 That crazy TV kept me up all night. How can I sleep with something yelling crazy things all night in my ears. And the nutty pictures. Wow. I dont know what it says when Im up so how am I going to know when Im sleeping.

Dr Strauss says its ok. He says my brains are lerning when I sleep and that will help me when Miss Kinnian starts my lessons in the hospitl (only I found out it isnt a hospitil its a labatory. I think its all crazy. If you can get smart

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when your sleeping why do people go to school. That thing I dont think will work. I use to watch the late show and the late late show on TV all the time and it never made me smart. Maybe you have to sleep while you watch it.

PROGRESS REPORT 9—April 3

Dr Strauss showed me how to keep the TV turned low so now I can sleep. I don't hear a thing. And I still dont understand what it says. A few times I play it over in the morning to find out what I lerned when I was sleeping and I dont think so. Miss Kinnian says Maybe its another langwidge or something. But most times it sounds american. It talks so fast faster then even Miss Gold who was my teacher in 6 grade and I remember she talked so fast I coudnt understand her.

I told Dr Strauss what good is it to get smart in my sleep. I want to be smart when Im awake. He says its the same thing and I have two minds. Theres the *subconscious* and the *conscious* (thats how you spell it). And one dont tell the other one what its doing. They dont even talk to each other. Thats why I dream. And boy have I been having crazy dreams. Wow. Ever since that night TV. The late late late late late show.

I forgot to ask him if it was only me or if everybody had those two minds.

(I just looked up the word in the dictionary Dr Strauss gave me. The word is *subconscious. adj. Of the nature of mental operations yet not present in consciousness; as, subconscious conflict of desires.*) There's more but I still dont know what it means. This isnt a very good dictionary for dumb people like me.

Anyway the headache is from the party. My frends from the factery Joe Carp and Frank Reilly invited me to go with them to Muggsys Saloon for some drinks. I dont like to drink but they said we will have lots of fun. I had a good time.

Joe Carp said I shoud show the girls how I mop out the toilet in the factory and he got me a mop. I showed them and everyone laffed when I told that Mr Donnegan said I was the best janiter he ever had because I like my job and do it good and never come late or miss a day except for my operashun.

I said Miss Kinnian always said Charlie be proud of your job because you do it good.

Everybody laffed and we had a good time and they gave me lots of drinks and Joe said Charlie is a card when hes potted. I dont know what that means but everybody likes me and we have fun. I cant wait to be smart like my best frends Joe Carp and Frank Reilly.

I dont remember how the party was over but I think I went out

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to buy a newspaper and coffe for Joe and Frank and when I came back there was no one their. I looked for them all over till late. Then I dont remember so good but I think I got sleepy or sick. A nice cop brot me back home. Thats what my landlady Mrs Flynn says.

But I got a headache and a big lump on my head and black and blue all over. I think maybe I fell but Joe Carp says it was the cop they beat up drunks some times. I don't think so. Miss Kinnian says cops are to help people. Anyway I got a bad headache and Im sick and hurt all over. I dont think Ill drink anymore.

April 6 I beat Algernon! I dint even know I beat him until Burt the tester told me. Then the second time I lost because I got so exited I fell off the chair before I finished. But after that I beat him 8 more times. I must be getting smart to beat a smart mouse like Algernon. But I dont *feel* smarter.

I wanted to race Algernon some more but Burt said thats enough for one day. They let me hold him for a minit. Hes not so bad. Hes soft like a ball of cotton. He blinks and when he opens his eyes their black and pink on the eges.

I said can I feed him because I felt bad to beat him and I wanted to be nice and make frends. Burt said no Algernon is a very specshul mouse with an operashun like mine, and he was the first of all the animals to stay smart so long. He told me Algernon is so smart that every day he has to solve a test to get his food. Its a thing like a lock on a door that changes every time Algernon goes in to eat so he has to lern something new to get his food. That made me sad because if he coudnt lern he woud be hungry.

I dont think its right to make you pass a test to eat. How woud Dr Nemur like it to have to pass a test every time he wants to eat. I think Ill be frends with Algernon.

April 9 Tonight after work Miss Kinnian was at the laboratory. She looked like she was glad to see me but scared. I told her dont worry Miss Kinnian Im not smart yet and she laffed. She said I have confidence in you Charlie the way you struggled so hard to read and right better than all the others. At werst you will have it for a littel wile and your doing somthing for sience.

We are reading a very hard book. I never read such a hard book before. Its called *Robinson Crusoe* about a man who gets merooned on a dessert Iland. Hes smart and figers out all kinds of things so he can have a house and food and hes a good swimmer. Only I feel sorry because hes all alone and has no frends. But I

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think their must be somebody else on the iland because theres a picture with his funny umbrella looking at footprints. I hope he gets a frend and not be lonly.

April 10 Miss Kinnian teaches me to spell better. She says look at a word and close your eyes and say it over and over until you remember. I have lots of truble with *through* that you say *threw* and *enough* and *tough* that you dont say *enew* and *tew*. You got to say *enuff* and *tuff*. Thats how I use to write it before I started to get smart. Im confused but Miss Kinnian says theres no reason in spelling.

Apr 14 Finished Robinson Crusoe. I want to find out more about what happens to him but Miss Kinnian says thats all there is. *Why*

Apr 15 Miss Kinnian says Im lerning fast. She read some of the Progress Reports and she looked at me kind of funny. She says Im a fine person and Ill show them all. I asked her why. She said never mind but I shoudnt feel bad if I find out that everybody isnt nice like I think. She said for a person who god gave so little to you done more then a lot of people with brains they never even used. I said all my frends are smart people but there good. They like me and they never did anything that wasnt nice. Then she got something in her eye and she had to run out to the ladys room.

Apr 16 Today, I lerned, the *comma*, this is a comma (,) a period, with a tail, Miss Kinnian, says its importent, because, it makes writing, better, she said, sombeody, coud lose, a lot of money, if a comma, isnt, in the, right place, I dont have, any money, and I dont see, how a comma, keeps you, from losing it,

But she says, everybody, uses commas, so Ill use, them too,

Apr 17 I used the comma wrong. Its punctuation. Miss Kinnian told me to look up long words in the dictionary to lern to spell them. I said whats the difference if you can read it anyway. She said its part of your education so now on Ill look up all the words Im not sure how to spell. It takes a long time to write that way but I think Im remembering. I only have to look up once and after that I get it right. Anyway thats how come I got the word *punctuation* right. (Its that way in the dictionary). Miss Kinnian says a period is punctuation too, and there are lots of other marks to lern. I told her I thot all the periods had to have tails but she said no.

You got to mix them up, she showed? me" how. to mix! them(up,. and now; I can! mix up all

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kinds" of punctuation, in! my writing? There, are lots! of rules? to lern; but Im gettin'g them in my head.

One thing I? like about, Dear Miss Kinnian: (thats the way it goes in a business letter if I ever go into business) is she, always gives me' a reason" when—I ask. She's a gen'ius! I wish! I cou'd be smart" like, her;

(Punctuation, is; fun!)

April 18 What a dope I am! I didn't even understand what she was talking about. I read the grammar book last night and it explanes the whole thing. Then I saw it was the same way as Miss Kinnian was trying to tell me, but I didn't get it. I got up in the middle of the night, and the whole thing straightened out in my mind.

Miss Kinnian said that the TV working in my sleep helped out. She said I reached a plateau. Thats like the flat top of a hill.

After I figgered out how punctuation worked, I read over all my old Progress Reports from the beginning. Boy, did I have crazy spelling and punctuation! I told Miss Kinnian I ought to go over the pages and fix all the mistakes but she said, "No, Charlie, Dr. Nemur wants them just as they are. That's why he let you keep them after they were photostated, to see your own progress. You're coming along fast, Charlie."

That made me feel good. After the lesson I went down and played with Algernon. We don't race any more.

April 20 I feel sick inside. Not sick like for a doctor, but inside my chest it feels empty like getting punched and a heartburn at the same time.

I wasn't going to write about it, but I guess I got to, because its important. Today was the first time I ever stayed home from work.

Last night Joe Carp and Frank Reilly invited me to a party. There were lots of girls and some men from the factory. I remembered how sick I got last time I drank too much, so I told Joe I didn't want anything to drink. He gave me a plain coke instead. It tasted funny, but I thought it was just a bad taste in my mouth.

We had a lot of fun for a while. Joe said I should dance with Ellen and she would teach me the steps. I fell a few times and I couldn't understand why because no one else was dancing besides Ellen and me. And all the time I was tripping because somebody's foot was always sticking out.

Then when I got up I saw the look on Joe's face and it gave me a funny feeling in my stomach. "He's a scream," one of the girls said. Everybody was laughing.

Frank said, "I ain't laughed so

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much since we sent him off for the newspaper that night at Muggsy's and ditched him."

"Look at him. His face is red."

"He's blushing. Charlie is blushing."

"Hey, Ellen, what'd you do to Charlie? I never saw him act like that before."

I didn't know what to do or where to turn. Everyone was looking at me and laughing and I felt naked. I wanted to hide myself. I ran out into the street and I threw up. Then I walked home. It's a funny thing I never knew that Joe and Frank and the others liked to have me around all the time to make fun of me.

Now I know what it means when they say "to pull a Charlie Gordon."

I'm ashamed.

PROGRESS REPORT 11

April 21 Still didn't go into the factory. I told Mrs. Flynn my landlady to call and tell Mr. Donnegan I was sick. Mrs. Flynn looks at me very funny lately like she's scared of me.

I think it's a good thing about finding out how everybody laughs at me. I thought about it a lot. It's because I'm so dumb and I don't even know when I'm doing something dumb. People think it's funny when a dumb person can't do things the same way they can.

Anyway, now I know I'm getting smarter every day. I know punctuation and I can spell good. I like to look up all the hard words in the dictionary and I remember them. I'm reading a lot now, and Miss Kinnian says I read very fast. Sometimes I even understand what I'm reading about, and it stays in my mind. There are times when I can close my eyes and think of a page and it all comes back like a picture.

Besides history, geography and arithmetic, Miss Kinnian said I should start to learn a few foreign languages. Dr. Strauss gave me some more tapes to play while I sleep. I still don't understand how that conscious and unconscious mind works, but Dr. Strauss says not to worry yet. He asked me to promise that when I start learning college subjects next week I wouldn't read any books on psychology—that is, until he gives me permission.

I feel a lot better today, but I guess I'm still a little angry that all the time people were laughing and making fun of me because I wasn't so smart. When I become intelligent like Dr. Strauss says, with three times my I.Q. of 68, then maybe I'll be like everyone else and people will like me and be friendly.

I'm not sure what an *I.Q.* is. Dr. Nemur said it was something that measured how intelligent you were—like a scale in the drugstore weighs pounds. But Dr. Strauss had a big arguement with him and

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said an I.Q. didn't weigh intelligence at all. He said an I.Q. showed how much intelligence you could get, like the numbers on the outside of a measuring cup. You still had to fill the cup up with stuff.

Then when I asked Burt, who gives me my intelligence tests and works with Algernon, he said that both of them were wrong (only I had to promise not to tell them he said so). Burt says that the I.Q. measures a lot of different things including some of the things you learned already, and it really isn't any good at all.

So I still don't know what I.Q. is except that mine is going to be over 200 soon. I didn't want to say anything, but I don't see how if they don't know *what* it is, or *where* it is— I don't see how they know *how much* of it you've got.

Dr. Nemur says I have to take a *Rorshach Test* tomorrow. I wonder what *that* is.

April 22 I found out what a *Rorshach* is. It's the test I took before the operation—the one with the inkblots on the pieces of cardboard. The man who gave me the test was the same one.

I was scared to death of those inkblots. I knew he was going to ask me to find the pictures and I knew I wouldn't be able to. I was thinking to myself, if only there was some way of knowing what kind of pictures were hidden there. Maybe there weren't any pictures at all. Maybe it was just a trick to see if I was dumb enough too look for something that wasn't there. Just thinking about that made me sore at him.

"All right, Charlie," he said, "you've seen these cards before, remember?"

"Of course I remember."

The way I said it, he knew I was angry, and he looked surprised. "Yes, of course. Now I want you to look at this one. What might this be? What do you see on this card? People see all sorts of things in these inkblots. Tell me what it might be for you—what it makes you think of."

I was shocked. That wasn't what I had expected him to say at all. "You mean there are no pictures hidden in those inkblots?"

He frowned and took off his glasses. "What?"

"Pictures. Hidden in the inkblots. Last time you told me that everyone could see them and you wanted me to find them too."

He explained to me that the last time he had used almost the exact same words he was using now. I didn't believe it, and I still have the suspicion that he misled me at the time just for the fun of it. Unless—I don't know any more—could I have been *that* feebleminded?

We went through the cards slowly. One of them looked like a pair of bats tugging at some-

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thing. Another one looked like two men fencing with swords. I imagined all sorts of things. I guess I got carried away. But I didn't trust him any more, and I kept turning them around and even looking on the back to see if there was anything there I was supposed to catch. While he was making his notes, I peeked out of the corner of my eye to read it. But it was all in code that looked like this:

WF+A DdF-Ad orig. WF-A SF+obj

The test still doesn't make sense to me. It seems to me that anyone could make up lies about things that they didn't really see. How could he know I wasn't making a fool of him by mentioning things that I didn't really imagine? Maybe I'll understand it when Dr. Strauss lets me read up on psychology.

April 25 I figured out a new way to line up the machines in the factory, and Mr. Donnegan says it will save him ten thousand dollars a year in labor and increased production. He gave me a $25 bonus.

I wanted to take Joe Carp and Frank Reilly out to lunch to celebrate, but Joe said he had to buy some things for his wife, and Frank said he was meeting his cousin for lunch. I guess it'll take a little time for them to get used to the changes in me. Everybody seems to be frightened of me. When I went over to Amos Borg and tapped him on the shoulder, he jumped up in the air.

People don't talk to me much any more or kid around the way they used to. It makes the job kind of lonely.

April 27 I got up the nerve today to ask Miss Kinnian to have dinner with me tomorrow night to celebrate my bonus.

At first she wasn't sure it was right, but I asked Dr. Strauss and he said it was okay. Dr. Strauss and Dr. Nemur don't seem to be getting along so well. They're arguing all the time. This evening when I came in to ask Dr. Strauss about having dinner with Miss Kinnian, I heard them shouting. Dr. Nemur was saying that it was *his* experiment and *his* research, and Dr. Strauss was shouting back that he contributed just as much, because he found me through Miss Kinnian and he performed the operation. Dr. Strauss said that someday thousands of neurosurgeons might be using his technique all over the world.

Dr. Nemur wanted to publish the results of the experiment at the end of this month. Dr. Strauss wanted to wait a while longer to be sure. Dr. Strauss said that Dr. Nemur was more interested in the Chair of Psychology at Princeton than he was in the experiment.

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Dr. Nemur said that Dr. Strauss was nothing but an opportunist who was trying to ride to glory on *his* coattails.

When I left afterwards, I found myself trembling. I don't know why for sure, but it was as if I'd seen both men clearly for the first time. I remember hearing Burt say that Dr. Nemur had a shrew of a wife who was pushing him all the time to get things published so that he could become famous. Burt said that the dream of her life was to have a big shot husband.

Was Dr. Strauss really trying to ride on his coattails?

April 28 I don't understand why I never noticed how beautiful Miss Kinnian really is. She has brown eyes and feathery brown hair that comes to the top of her neck. She's only thirty-four! I think from the beginning I had the feeling that she was an unreachable genius—and very, very old. Now, every time I see her she grows younger and more lovely.

We had dinner and a long talk. When she said that I was coming along so fast that soon I'd be leaving her behind, I laughed.

"It's true, Charlie. You're already a better reader than I am. You can read a whole page at a glance while I can take in only a few lines at a time. And you remember every single thing you read. I'm lucky if I can recall the main thoughts and the general meaning."

"I don't feel intelligent. There are so many things I don't understand."

She took out a cigarette and I lit it for her. "You've got to be a *little* patient. You're accomplishing in days and weeks what it takes normal people to do in half a lifetime. That's what makes it so amazing. You're like a giant sponge now, soaking things in. Facts, figures, general knowledge. And soon you'll begin to connect them, too. You'll see how the different branches of learning are related. There are many levels, Charlie, like steps on a giant ladder that take you up higher and higher to see more and more of the world around you.

"I can see only a little bit of that, Charlie, and I won't go much higher than I am now, but you'll keep climbing up and up, and see more and more, and each step will open new worlds that you never even knew existed." She frowned. "I hope . . . I just hope to God—"

"What?"

"Never mind, Charles. I just hope I wasn't wrong to advise you to go into this in the first place."

I laughed. "How could that be? It worked, didn't it? Even Algernon is still smart."

We sat there silently for a while and I knew what she was thinking about as she watched me toy-

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ing with the chain of my rabbit's foot and my keys. I didn't want to think of that possibility any more than elderly people want to think of death. I *knew* that this was only the beginning. I knew what she meant about levels because I'd seen some of them already. The thought of leaving her behind made me sad.

I'm in love with Miss Kinnian.

PROGRESS REPORT 12

April 30 I've quit my job with Donnegan's Plastic Box Company. Mr. Donnegan insisted that it would be better for all concerned if I left. What did I do to make them hate me so?

The first I knew of it was when Mr. Donnegan showed me the petition. Eight hundred and forty names, everyone connected with the factory, except Fanny Girden. Scanning the list quickly, I saw at once that hers was the only missing name. All the rest demanded that I be fired.

Joe Carp and Frank Reilly wouldn't talk to me about it. No one else would either, except Fanny. She was one of the few people I'd known who set her mind to something and believed it no matter what the rest of the world proved, said or did—and Fanny did not believe that I should have been fired. She had been against the petition on principle and despite the pressure and threats she'd held out.

"Which don't mean to say," she remarked, "that I don't think there's something mighty strange about you, Charlie. Them changes. I don't know. You used to be a good, dependable, ordinary man—not too bright maybe, but honest. Who knows what you done to yourself to get so smart all of a sudden. Like everybody around here's been saying, Charlie, it's not right."

"But how can you say that, Fanny? What's wrong with a man becoming intelligent and wanting to acquire knowledge and understanding of the world around him?"

She stared down at her work and I turned to leave. Without looking at me, she said: "It was evil when Eve listened to the snake and ate from the tree of knowledge. It was evil when she saw that she was naked. If not for that none of us would ever have to grow old and sick, and die."

Once again now I have the feeling of shame burning inside me. This intelligence has driven a wedge between me and all the people I once knew and loved. Before, they laughed at me and despised me for my ignorance and dullness; now, they hate me for my knowledge and understanding. What in God's name do they want of me?

They've driven me out of the

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factory. Now I'm more alone than ever before . . .

May 15 Dr. Strauss is very angry at me for not having written any progress reports in two weeks. He's justified because the lab is now paying me a regular salary. I told him I was too busy thinking and reading. When I pointed out that writing was such a slow process that it made me impatient with my poor handwriting, he suggested that I learn to type. It's much easier to write now because I can type nearly seventy-five words a minute. Dr. Strauss continually reminds me of the need to speak and write simply so that people will be able to understand me.

I'll try to review all the things that happened to me during the last two weeks. Algernon and I were presented to the *American Psychological Association* sitting in convention with the *World Psychological Association* last Tuesday. We created quite a sensation. Dr. Nemur and Dr. Strauss were proud of us.

I suspect that Dr. Nemur, who is sixty—ten years older than Dr. Strauss—finds it necessary to see tangible results of his work. Undoubtedly the result of pressure by Mrs. Nemur.

Contrary to my earlier impressions of him, I realize that Dr. Nemur is not at all a genius. He has a very good mind, but it struggles under the spectre of self-doubt. He wants people to take him for a genius. Therefore, it is important for him to feel that his work is accepted by the world. I believe that Dr. Nemur was afraid of further delay because he worried that someone else might make a discovery along these lines and take the credit from him.

Dr. Strauss on the other hand might be called a genius, although I feel that his areas of knowledge are too limited. He was educated in the tradition of narrow specialization; the broader aspects of background were neglected far more than necessary—even for a neuro-surgeon.

I was shocked to learn that the only ancient languages he could read were Latin, Greek and Hebrew, and that he knows almost nothing of mathematics beyond the elementary levels of the calculus of variations. When he admitted this to me, I found myself almost annoyed. It was as if he'd hidden this part of himself in order to deceive me, pretending—as do many people I've discovered—to be what he is not. No one I've ever known is what he appears to be on the surface.

Dr. Nemur appears to be uncomfortable around me. Sometimes when I try to talk to him, he just looks at me strangely and turns away. I was angry at first when Dr. Strauss told me I was giving Dr. Nemur an inferiority

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complex. I thought he was mocking me and I'm oversensitive at being made fun of.

How was I to know that a highly respected psycho-experimentalist like Nemur was unacquainted with Hindustani and Chinese? It's absurd when you consider the work that is being done in India and China today in the very field of his study.

I asked Dr. Strauss how Nemur could refute Rahajamati's attack on his method and results if Nemur couldn't even read them in the first place. That strange look on Dr. Strauss' face can mean only one of two things. Either he doesn't want to tell Nemur what they're saying in India, or else—and this worries me—Dr. Strauss doesn't know either. I must be careful to speak and write clearly and simply so that people won't laugh.

May 18 I am very disturbed. I saw Miss Kinnian last night for the first time in over a week. I tried to avoid all discussions of intellectual concepts and to keep the conversation on a simple, everyday level, but she just stared at me blankly and asked me what I meant about the mathematical variance equivalent in Dorbermann's *Fifth Concerto.*

When I tried to explain she stopped me and laughed. I guess I got angry, but I suspect I'm approaching her on the wrong level. No matter what I try to discuss with her, I am unable to communicate. I must review Vrostadt's equations on *Levels of Semantic Progression.* I find that I don't communicate with people much any more. Thank God for books and music and things I can think about. I am alone in my apartment at Mrs. Flynn's boarding house most of the time and seldom speak to anyone.

May 20 I would not have noticed the new dishwasher, a boy of about sixteen, at the corner diner where I take my evening meals if not for the incident of the broken dishes.

They crashed to the floor, shattering and sending bits of white china under the tables. The boy stood there, dazed and frightened, holding the empty tray in his hand. The whistles and catcalls from the customers (the cries of "hey, there go the profits!"... "*Mazeltov!*"... and "well, *he* didn't work here very long..." which invariably seems to follow the breaking of glass or dishware in a public restaurant) all seemed to confuse him.

When the owner came to see what the excitement was about, the boy cowered as if he expected to be struck and threw up his arms as if to ward off the blow.

"All right! All right, you dope," shouted the owner, "don't just stand there! Get the broom and

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sweep that mess up. A broom . . . a broom, you idiot! It's in the kitchen. Sweep up all the pieces."

The boy saw that he was not going to be punished. His frightened expression disappeared and he smiled and hummed as he came back with the broom to sweep the floor. A few of the rowdier customers kept up the remarks, amusing themselves at his expense.

"Here, sonny, over here there's a nice piece behind you . . ."

"C'mon, do it again . . ."

"He's not so dumb. It's easier to break 'em than to wash 'em . . ."

As his vacant eyes moved across the crowd of amused onlookers, he slowly mirrored their smiles and finally broke into an uncertain grin at the joke which he obviously did not understand.

I felt sick inside as I looked at his dull, vacuous smile, the wide, bright eyes of a child, uncertain but eager to please. They were laughing at him because he was mentally retarded.

And I had been laughing at him too.

Suddenly, I was furious at myself and all those who were smirking at him. I jumped up and shouted, "Shut up! Leave him alone! It's not his fault he can't understand! He can't help what he is! But for God's sake . . . he's still a human being!"

The room grew silent. I cursed myself for losing control and creating a scene. I tried not to look at the boy as I paid my check and walked out without touching my food. I felt ashamed for both of us.

How strange it is that people of honest feelings and sensibility, who would not take advantage of a man born without arms or legs or eyes—how such people think nothing of abusing a man born with low intelligence. It infuriated me to think that not too long ago I, like this boy, had foolishly played the clown.

And I had almost forgotten.

I'd hidden the picture of the old Charlie Gordon from myself because now that I was intelligent it was something that had to be pushed out of my mind. But today in looking at that boy, for the first time I saw what I had been. *I was just like him!*

Only a short time ago, I learned that people laughed at me. Now I can see that unknowingly I joined with them in laughing at myself. That hurts most of all.

I have often reread my progress reports and seen the illiteracy, the childish naïveté, the mind of low intelligence peering from a dark room, through the keyhole, at the dazzling light outside. I see that even in my dullness I knew that I was inferior, and that other people had something I lacked—something denied me. In my mental blindness, I thought that it was somehow connected with the abil-

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ity to read and write, and I was sure that if I could get those skills I would automatically have intelligence too.

Even a feeble-minded man wants to be like other men.

A child may not know how to feed itself, or what to eat, yet it knows of hunger.

This then is what I was like. I never knew. Even with my gift of intellectual awareness, I never really knew.

This day was good for me. Seeing the past more clearly, I have decided to use my knowledge and skills to work in the field of increasing human intelligence levels. Who is better equipped for this work? Who else has lived in both worlds? These are my people. Let me use my gift to do something for them.

Tomorrow, I will discuss with Dr. Strauss the manner in which I can work in this area. I may be able to help him work out the problems of widespread use of the technique which was used on me. I have several good ideas of my own.

There is so much that might be done with this technique. If I could be made into a genius, what about thousands of others like myself? What fantastic levels might be achieved by using this technique on normal people? On *geniuses*?

There are so many doors to open. I am impatient to begin.

PROGRESS REPORT 13

May 23 It happened today. Algernon bit me. I visited the lab to see him as I do occasionally, and when I took him out of his cage, he snapped at my hand. I put him back and watched him for a while. He was unusually disturbed and vicious.

May 24 Burt, who is in charge of the experimental animals, tells me that Algernon is changing. He is less cooperative; he refuses to run the maze any more; general motivation has decreased. And he hasn't been eating. Everyone is upset about what this may mean.

May 25 They've been feeding Algernon, who now refuses to work the shifting-lock problem. Everyone identifies me with Algernon. In a way we're both the first of our kind. They're all pretending that Algernon's behavior is not necessarily significant for me. But it's hard to hide the fact that some of the other animals who were used in this experiment are showing strange behavior.

Dr. Strauss and Dr. Nemur have asked me not to come to the lab any more. I know what they're thinking but I can't accept it. I am going ahead with my plans to carry their research forward. With all due respect to both of these fine scientists, I am well aware of their limitations. If there is an an-

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swer, I'll have to find it out for myself. Suddenly, time has become very important to me.

May 29 I have been given a lab of my own and permission to go ahead with the research. I'm on to something. Working day and night. I've had a cot moved into the lab. Most of my writing time is spent on the notes which I keep in a separate folder, but from time to time I feel it necessary to put down my moods and my thoughts out of sheer habit.

I find the *calculus of intelligence* to be a fascinating study. Here is the place for the application of all the knowledge I have acquired. In a sense it's the problem I've been concerned with all my life.

May 31 Dr. Strauss thinks I'm working too hard. Dr. Nemur says I'm trying to cram a lifetime of research and thought into a few weeks. I know I should rest, but I'm driven on by something inside that won't let me stop. I've got to find the reason for the sharp regression in Algernon. I've got to know *if* and *when* it will happen to me.

June 4

LETTER TO DR. STRAUSS (*copy*)

Dear Dr. Strauss:

Under separate cover I am sending you a copy of my report entitled, "The Algernon-Gordon Effect: A Study of Structure and Function of Increased Intelligence," which I would like to have you read and have published.

As you see, my experiments are completed. I have included in my report all of my formulae, as well as mathematical analysis in the appendix. Of course, these should be verified.

Because of its importance to both you and Dr. Nemur (and need I say to myself, too?) I have checked and rechecked my results a dozen times in the hope of finding an error. I am sorry to say the results must stand. Yet for the sake of science, I am grateful for the little bit that I here add to the knowledge of the function of the human mind and of the laws governing the artificial increase of human intelligence.

I recall your once saying to me that an experimental *failure* or the *disproving* of a theory was as important to the advancement of learning as a success would be. I know now that this is true. I am sorry, however, that my own contribution to the field must rest upon the ashes of the work of two men I regard so highly.

Yours truly,

Charles Gordon

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June 5 I must not become emotional. The facts and the results of my experiments are clear, and the more sensational aspects of my own rapid climb cannot obscure the fact that the tripling of intelligence by the surgical technique developed by Dr.'s Strauss and Nemur must be viewed as having little or no practical applicability (at the present time) to the increase of human intelligence.

As I review the records and data on Algernon, I see that although he is still in his physical infancy, he has regressed mentally. Motor activity is impaired; there is a general reduction of glandular activity; there is an accelerated loss of coordination.

There are also strong indications of progressive amnesia.

As will be seen by my report, these and other physical and mental deterioration syndromes can be predicted with statistically significant results by the application of my formula.

The surgical stimulus to which we were both subjected has resulted in an intensification and acceleration of all mental processes. The unforeseen development, which I have taken the liberty of calling the *Algernon-Gordon Effect,* is the logical extension of the entire intelligence speed-up. The hypothesis here proven may be described simply in the following terms: Artificially increased intelligence deteriorates at a rate of time directly proportional to the quantity of the increase.

I feel that this, in itself, is an important discovery.

As long as I am able to write, I will continue to record my thoughts in these progress reports. It is one of my few pleasures. However, by all indications, my own mental deterioration will be very rapid.

I have already begun to notice signs of emotional instability and forgetfulness, the first symptoms of the burn-out.

June 10 Deterioration progressing. I have become absent-minded. Algernon died two days ago. Dissection shows my predictions were right. His brain had decreased in weight and there was a general smoothing out of cerebral convolutions as well as a deepening and broadening of brain fissures.

I guess the same thing is or will soon be happening to me. Now that it's definite, I don't want it to happen.

I put Algernon's body in a cheese box and buried him in the back yard. I cried.

June 15 Dr. Strauss came to see me again. I wouldn't open the door and I told him to go away. I want to be left to myself. I have become touchy and irritable. I feel the darkness closing in. It's

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hard to throw off thoughts of suicide. I keep telling myself how important this introspective journal will be.

It's a strange sensation to pick up a book that you've read and enjoyed just a few months ago and discover that you don't remember it. I remembered how great I thought John Milton was, but when I picked up *Paradise Lost* I couldn't understand it at all. I got so angry I threw the book across the room.

I've got to try to hold on to some of it. Some of the things I've learned. Oh, God, please don't take it all away.

June 19 Sometimes, at night, I go out for a walk. Last night I couldn't remember where I lived. A policeman took me home. I have the strange feeling that this has all happened to me before—a long time ago. I keep telling myself I'm the only person in the world who can describe what's happening to me.

June 21 Why can't I remember? I've got to fight. I lie in bed for days and I don't know who or where I am. Then it all comes back to me in a flash. Fugues of amnesia. Symptoms of senility—second childhood. I can watch them coming on. It's so cruelly logical. I learned so much and so fast. Now my mind is deteriorating rapidly. I won't let it happen. I'll fight it. I can't help thinking of the boy in the restaurant, the blank expression, the silly smile, the people laughing at him. No—please—not that again . . .

June 22 I'm forgetting things that I learned recently. It seems to be following the classic pattern—the last things learned are the first things forgotten. Or is that the pattern? I'd better look it up again. . . .

I reread my paper on the *Algernon-Gordon Effect* and I get the strange feeling that it was written by someone else. There are parts I don't even understand.

Motor activity impaired. I keep tripping over things, and it becomes increasingly difficult to type.

June 23 I've given up using the typewriter completely. My coordination is bad. I feel that I'm moving slower and slower. Had a terrible shock today. I picked up a copy of an article I used in my research, Krueger's *Uber psychische Ganzheit*, to see if it would help me understand what I had done. First I thought there was something wrong with my eyes. Then I realized I could no longer read German. I tested myself in other languages. All gone.

June 30 A week since I dared to write again. It's slipping away like sand through my fingers.

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Most of the books I have are too hard for me now. I get angry with them because I know that I read and understood them just a few weeks ago.

I keep telling myself I must keep writing these reports so that somebody will know what is happening to me. But it gets harder to form the words and remember spellings. I have to look up even simple words in the dictionary now and it makes me impatient with myself.

Dr. Strauss comes around almost every day, but I told him I wouldn't see or speak to anybody. He feels guilty. They all do. But I don't blame anyone. I knew what might happen. But how it hurts.

July 7 I don't know where the week went. Todays Sunday I know because I can see through my window people going to church. I think I stayed in bed all week but I remember Mrs. Flynn bringing food to me a few times. I keep saying over and over Ive got to do something but then I forget or maybe its just easier not to do what I say Im going to do.

I think of my mother and father a lot these days. I found a picture of them with me taken at a beach. My father has a big ball under his arm and my mother is holding me by the hand. I dont remember them the way they are in the picture. All I remember is my father drunk most of the time and arguing with mom about money.

He never shaved much and he used to scratch my face when he hugged me. My mother said he died but Cousin Miltie said he heard his mom and dad say that my father ran away with another woman. When I asked my mother she slapped my face and said my father was dead. I dont think I ever found out which was true but I dont care much. (He said he was going to take me to see cows on a farm once but he never did. He never kept his promises . . .)

July 10 My landlady Mrs Flynn is very worried about me. She says the way I lay around all day and dont do anything I remind her of her son before she threw him out of the house. She said she doesnt like loafers. If Im sick its one thing, but if Im a loafer thats another thing and she wont have it. I told her I think Im sick.

I try to read a little bit every day, mostly stories, but sometimes I have to read the same thing over and over again because I dont know what it means. And its hard to write. I know I should look up all the words in the dictionary but its so hard and Im so tired all the time.

Then I got the idea that I would only use the easy words instead of the long hard ones.

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That saves time. I put flowers on Algernons grave about once a week. Mrs Flynn thinks Im crazy to put flowers on a mouses grave but I told her that Algernon was special.

July 14 Its sunday again. I dont have anything to do to keep me busy now because my television set is broke and I dont have any money to get it fixed. (I think I lost this months check from the lab. I dont remember).

I get awful headaches and asperin doesnt help me much. Mrs Flynn knows Im really sick and she feels very sorry for me. Shes a wonderful woman whenever someone is sick.

July 22 Mrs Flynn called a strange doctor to see me. She was afraid I was going to die. I told the doctor I wasnt too sick and that I only forget sometimes. He asked me did I have any friends or relatives and I said no I dont have any. I told him I had a friend called Algernon once but he was a mouse and we used to run races together. He looked at me kind of funny like he thought I was crazy.

He smiled when I told him I used to be a genius. He talked to me like I was a baby and he winked at Mrs Flynn. I got mad and chased him out because he was making fun of me the way they all used to.

July 24 I have no more money and Mrs Flynn says I got to go to work somewhere and pay the rent because I havent paid for over two months. I dont know any work but the job I used to have at Donnegans Plastic Box Company. I dont want to go back there because they all knew me when I was smart and maybe they'll laugh at me. But I dont know what else to do to get money.

July 25 I was looking at some of my old progress reports and its very funny but I cant read what I wrote. I can make out some of the words but they dont make sense.

Miss Kinnian came to the door but I said go away I dont want to see you. She cried and I cried too but I wouldnt let her in because I didnt want her to laugh at me. I told her I didn't like her any more. I told her I didn't want to be smart any more. Thats not true. I still love her and I still want to be smart but I had to say that so shed go away. She gave Mrs. Flynn money to pay the rent. I dont want that. I got to get a job.

Please . . . please let me not forget how to read and write . . .

July 27 Mr. Donnegan was very nice when I came back and asked him for my old job of janitor. First he was very suspicious but I told

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him what happened to me then he looked very sad and put his hand on my shoulder and said Charlie Gordon you got guts.

Everybody looked at me when I came downstairs and started working in the toilet sweeping it out like I used to. I told myself Charlie if they make fun of you dont get sore because you remember their not so smart as you once thot they were. And besides they were once your friends and if they laughed at you that doesnt mean anything because they liked you too.

One of the new men who came to work there after I went away made a nasty crack he said hey Charlie I hear your a very smart fella a real quiz kid. Say something intelligent. I felt bad but Joe Carp came over and grabbed him by the shirt and said leave him alone you lousy cracker or Ill break your neck. I didnt expect Joe to take my part so I guess hes really my friend.

Later Frank Reilly came over and said Charlie if anybody bothers you or trys to take advantage you call me or Joe and we will set em straight. I said thanks Frank and I got choked up so I had to turn around and go into the supply room so he wouldnt see me cry. Its good to have friends.

July 28 I did a dumb thing today I forgot I wasnt in Miss Kinnians class at the adult center any more like I use to be. I went in and sat down in my old seat in the back of the room and she looked at me funny and she said Charles. I dint remember she ever called me that before only Charlie so I said hello Miss Kinnian Im redy for my lesin today only I lost my reader that we was using. She startid to cry and run out of the room and everybody looked at me and I saw they wasnt the same pepul who use to be in my class.

Then all of a suddin I rememberd some things about the operashun and me getting smart and I said holy smoke I reely pulled a Charlie Gordon that time. I went away before she come back to the room.

Thats why Im going away from New York for good. I dont want to do nothing like that agen. I dont want Miss Kinnian to feel sorry for me. Evry body feels sorry at the factery and I dont want that eather so Im going someplace where nobody knows that Charlie Gordon was once a genus and now he cant even reed a book or rite good.

Im taking a cuple of books along and even if I cant reed them Ill practise hard and maybe I wont forget every thing I lerned. If I try reel hard maybe Ill be a littel bit smarter then I was before the operashun. I got my rabits foot and my luky penny and maybe they will help me.

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If you ever reed this Miss Kinnian dont be sorry for me Im glad I got a second chanse to be smart becaus I lerned a lot of things that I never even new were in this world and Im grateful that I saw it all for a littel bit. I dont know why Im dumb agen or what I did wrong maybe its becaus I dint try hard enuff. But if I try and practis very hard maybe Ill get a littl smarter and know what all the words are. I remember a littel bit how nice I had a feeling with the blue book that has the torn cover when I red it. Thats why Im gonna keep trying to get smart so I can have that feeling agen. Its a good feeling to know things and be smart. I wish I had it rite now if I did I woud sit down and reed all the time. Anyway I bet Im the first dumb person in the world who ever found out somthing importent for sience. I remember I did somthing but I dont remember what. So I gess its like I did it for all the dumb pepul like me.

Goodbye Miss Kinnian and Dr. Strauss and evreybody. And P.S. please tell Dr Nemur not to be such a grouch when pepul laff at him and he woud have more frends. Its easy to make frends if you let pepul laff at you. Im going to have lots of frends where I go.

P.P.S. Please if you get a chanse put some flowrs on Algernons grave in the bak yard . . .

Coming Next Month...

Three short novelets:

Tenth Time Around, by J. T. McIntosh
A bestselling novelist jumps from continuum to continuum, seeking a way to win the girl he loves in all of them.

The Shout, by Robert Graves
A strange man from far away, with a shout that could drive men mad—or kill.

The Man Who Could Not Stop, by A. Bertram Chandler
A man on the run, trapped on the outer rim of the Galaxy, and his ingenious, desperate attempt at escape.

Plus a number of other fine stories by such authors as Jack London, Chad Oliver, and Avram Davidson . . . as well as Isaac Asimov on Science, and Damon Knight on Books.

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SCIENCE

An examination of the long-range evils of sanitary plumbing, and of an irreplaceable essential of life.

LIFE'S BOTTLENECK

by Isaac Asimov

VILLAINS ON A COSMIC SCALE ARE WHERE YOU FIND THEM, AND SCIENCE-fiction has found some majestic ones indeed, including exploding suns and invading Martians. Real life, in recent years, has found some actual villains that would have been science-fictional ones not too long ago, such as nuclear bombs and melting ice-caps.

But there are always more, and some are by no means obvious. Consider, for example, the long-range evil of sanitary plumbing and modern sewage disposal. . . .

To begin with, let's look at the ocean, the mother of all things living. Out of its substance, some billions of years ago, life formed, utilizing for the purpose the various available atoms, though it had to juggle the proportions a bit.

For instance, the ocean is mainly water, and so is living tissue: the ocean is 97 percent water by weight, while living things in the ocean average about 80 percent water.

However, this is not quite a fair comparison. The water molecule is made up of two hydrogen atoms and an oxygen atom. In the ocean, water itself is the only substance to speak of which contains these atoms. In living matter, however, hydrogen and oxygen are contained in many of the constituent molecules other than water; and all this

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hydrogen and oxygen came from water originally. This "hydrogen-and-oxygen-elsewhere" should therefore be counted with water.

To get a more proper panorama, let's consider the percent by weight of each constituent type of atom. We can do this for the ocean, and for the copepod, a tiny crustacean which is one of the more common forms of the ocean's swarming animal life.*

TABLE 1

	Percent Composition of Ocean	Percent Composition of Copepod	Concentration Factor
Oxygen	85.89	79.99	0.93
Hydrogen	10.82	10.21	0.94
Everything else	3.29	9.80	3.35

The column headed "concentration factor" in this table is the most important. It represents the ratio of the percentage of a particular substance in living tissue to the percentage of the same substance in the environment.

For instance, oxygen and hydrogen are found in smaller percentage in tissue than in ocean so the concentration factor for each is less than 1, as is shown in the table. To convert 100 pounds of ocean (containing 96.71 pounds of hydrogen and oxygen) into 100 pounds of copepod (containing 90.20 pounds of hydrogen and oxygen), 6.51 pounds of hydrogen and oxygen must be gotten rid of.

Whenever the concentration factor for any substance is less than 1, it means that that particular substance is something that, potentially at least, can never be a limiting factor in the multiplication of living

* I sometimes wonder if I ought not give my sources for the material in these articles of mine. It's obvious—or I hope it is—that I don't make up figures out of my head; and it's only fair to give credit. Yet I don't want to get water-logged with professorial formality, either. As an experiment, I'll give my sources this time and say that the data for this article are derived from:

1. Goldschmidt, V. M. GEOCHEMISTRY, Clarendon Press, 1954
2. Mason, B. PRINCIPLES OF GEOCHEMISTRY (2nd edition), Wiley & Sons, 1958
3. Cole, L. C. "The Ecosphere," *Scientific American*, April, 1958
4. Redfield, A. C. "The Biological Control of Chemical Factors in the Environment," *American Scientist*, September, 1958

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things. Life's problem will always be to get rid of it, rather than to collect it.

The situation is the reverse as far as "everything else" is concerned. Here 100 pounds of copepod contains 9.80 pounds of "everything else" while 100 pounds of ocean—out of which the copepod is formed—only contains 3.29 pounds. It takes 335 pounds of ocean to contain the 9.80 pounds of "everything else."

A concentration factor greater than 1 sets up the possibility of a bottleneck. Ideally, life could multiply in the ocean till the entire ocean had been converted into living tissue. After all, what is there to stop the endless and unlimited multiplication of life?

Well, suppose you begin with 335 pounds of ocean. By the time, copepods have multiplied to a total weight of 100 pounds, they have incorporated all the "everything else" in the supply of ocean into their own bodies. There is still 235 pounds of ocean left, but it is pure water and cannot be converted into copepod.

The greater the concentration factor, the more quickly that limit would have been reached and the smaller the fraction of the total environment that can be converted into living tissue.

Of course, I have deliberately simplified the matter, to begin with, in order to make the point. Actually, the "everything else" is a conglomerate of a dozen or so elements, each of which is essential to life, and none of which can be dispensed with.

Each essential element is present in different amounts in the ocean; each is present in different amounts in living tissue. Each, therefore, has its own concentration factor. As soon as any one of them is completely used up, the possibility of the further expansion of life, generally, halts. One form of life can grow at the expense of another, but the total quantity of protoplasm can increase no further.

The essential element with the highest concentration factor is the one first used up and is, therefore, life's bottleneck.

Let's therefore compare the ocean and the copepod in finer detail, omitting the hydrogen and oxygen and just considering the "everything else." This is done in Table 2.

You can see that concentration factors do indeed vary widely from element to element. Only four elements have factors that are really extreme; that is, over a thousand. Of these four, the values for carbon and nitrogen are not really as extreme as they seem, however, since the ocean is not the only source of these elements. There is, for instance, some carbon dioxide in the air, and all of that is available to

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TABLE 2

	Percent Composition of Ocean	Percent Composition of Copepod	Concentration Factor
Carbon	0.0031	6.10	2,000
Nitrogen	0.00008	1.52	19,000
Chlorine	2.04	1.05	0.52
Sodium	1.09	0.54	0.50
Potassium	0.042	0.29	6.9
Sulfur	0.097	0.14	1.4
Phosphorus	0.000011	0.13	12,000
Calcium	0.0024	0.04	16.5
Magnesium	0.13	0.03	0.23
Iron	0.000002	0.007	3,500
Silicon	0.0004	0.007	17
Bromine	0.0072	0.0009	0.12
Iodine	0.000005	0.0002	40

ocean life. (And the supply of atmospheric carbon dioxide is increasing these days, as we burn coal and oil.)

There is also a vast quantity of nitrogen in the air; much more than there is in the ocean. This is available to ocean-life, too, at least indirectly, through the activity of nitrogen-fixing bacteria. These convert gaseous nitrogen, which is itself unusable by higher forms of life, into nitrates, which are usable.

For these reasons, neither carbon nor nitrogen can ever be considered bottlenecks in the additional formation of total protoplasm. There is only a finite quantity of both, but long before life feels the pinch in the supply of either, there is the shortage of iron and phosphorus to be contended with.

And here phosphorus is four times as critical as iron. The copepod,

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of course, is only one type of life, but in general, this pattern carries through. Phosphorus has the highest concentration factor; it is the first element to be used up. Life can multiply until all the phosphorus is gone and then there is an inexorable halt.

There is another factor—utilization of phosphorus in this sense is possible only under favorable energy conditions. For it takes energy to concentrate the phosphorus and iron of the ocean to the levels required by living tissue. For that matter, it takes energy to expel enough of the chlorine, sodium, magnesium and bromine to bring their concentrations down to levels tolerated by living tissue. It also takes energy to convert the simple low-energy compounds of the ocean (even after appropriate concentration or thinning-out) into the complicated high-energy compounds characteristic of living tissue.

The energy required is supplied by sunlight, which is inexhaustible in those places where it exists. Where it does exist, plant cells multiply, and, by photosynthesis, convert the radiant energy of the sun into the chemical energy of carbohydrates, fats and proteins. Animals (a parasitic form of life making up only a small portion of the total) obtain their energy by eating plant cells and metabolizing their tissue substance for the chemical energy it contains.

But sunlight only exists in the top 150 meters of the ocean. Below that, sunlight does not penetrate and plant cells do not grow. It is only in the top 150 meters (the "euphotic zone," from Greek words meaning "good light") that the energy supply itself is not a bottleneck and life can multiply in all its forms until all the phosphorus is used up.

And it does exactly that.

The phosphorus content of the surface ocean water is virtually zero. Just about all the phosphorus it contains is organic; that is, it is found either in the living cells or in the wastes and dead residues thereof.

What happens, then, in the euphotic zone, is a standoff. Animal life eats plant life, while plant life, using animal wastes as phosphorus source, grows to replace that portion of itself that has been eaten. The total volume of life is at a steady maximum.

Life below the euphotic zone depends for its existence on an organic rain from that zone. Animal organisms sometimes swim downward out of the euphotic zone (and plant cells are occasionally forced down by an unlucky current) and there they risk being eaten by creatures that live in the sub-euphotic zone.

Also, dead remnants of life drift downward. They are gobbled up

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by the animal life of the depths (no plant life below the euphotic zone) which in turn contributes to a continuous drizzle that moves still lower down. In the long run, this perpetually renewed drizzle supports all life down to the very floor of the abyss.

Below the euphotic zone, it is energy, not phosphorus, that is the bottleneck; energy in the form of the organic compounds of this drizzle, which animals can feed on (in addition to each other, of course) and which they can metabolize for energy. Below the euphotic zone, then, there is less life than is necessary to incorporate all the phosphorus of the surroundings. There are, therefore, inorganic phosphorus compounds (phosphates) remaining unconverted in the deep ocean water.

The organic drizzle represents a loss of phosphorus to the euphotic zone, and if there were nothing to counteract this transfer of phosphorus from the euphotic zone to the depths, the quantity of life in the euphotic zone would inexorably decline, and eventually blink out.

Fortunately, there is circulation between the depths and the surface of the ocean. There is an upwelling of water from the abyss, rich in phosphorus, which replaces the phosphorus lost in the organic drizzle. This upwelling is greatest in cold waters such as those of the Antarctic and the North Atlantic. There, the chill and heavy surface waters sink and are replaced from the depths. There, consequently, the euphotic zone is richest in phosphorus and can support the greatest concentration of life. (Giant whales, which require a great deal of food for maintenance, for that reason congregate in the Antarctic and North Atlantic.)

On the other hand, the warm and light surface waters of the warm areas of Earth remain tenaciously afloat and are not directly replaced by the colder and heavier waters from the depths. They must depend on surface currents from the cold north and south to replenish their phosphorus content. This second-hand supply of phosphorus has already been plundered by the life-forms that reached it first, so the ocean life of the tropics is less rich than that of the colder zones. In warm landlocked portions of the ocean, such as the Mediterranean Sea, which are relatively sheltered from the phosphorus-relief of even the cold surface current, the ocean life is still less rich.

On the whole, though, there is a balance everywhere in the oceans, and, again on the whole, it is the concentration of phosphorus, life's bottleneck, that dictates the nature of the balance.

The situation with respect to land-based life has special points of

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interest. Land-life is a latecomer to the scene and is still, quantitatively speaking, a minor offshoot of the ocean. Something like 85 percent of all living matter lives in water; it is only the fact that Homo sapiens lives on land that makes us give terrestrial environment the attention we do.

On land, as you would expect of life-forms that evolved in water, the real bottleneck is the water itself, which no longer surrounds and permeates the life-forms. Land-life, in consequence, has cut down on its use of hydrogen and oxygen; whereas hydrogen and oxygen together make up about 90 percent of a copepod, it makes up only about 86 percent of a land plant like alfalfa, and only 72 percent of a land animal such as man.

The cut-down, though measurable, is not drastic, however, and in land areas that receive a scant supply of water, life forms are sparse, regardless of what elements the soil might contain.

Granting the needed water, bottlenecks must next be sought for among elements other than oxygen or hydrogen. Carbon and nitrogen are eliminated on land for the same reason they were eliminated in the ocean—the atmospheric supply of nitrogen, thanks to nitrogen-fixing bacteria, is ample and the carbon supply is bulked out by the atmospheric carbon dioxide.

Leaving out hydrogen, oxygen, carbon and nitrogen, then, the remaining elements ultimately must all be derived from the minerals of the soil. For these we can set up Table 3, comparing the percentage composition of Earth's crust with that of an example of terrestrial plant life, such as alfalfa. (On land as in the sea, plant life predominates quantitatively, and animal life is absolutely dependent upon it. Whatever element is life's bottleneck for plants is therefore the bottleneck for animals as well.)

In some respects, the concentration factors in Table 3 are not as good as they appear. Comparing them with those in Table 2 would make it seem that by and large, soil is so much more packed with the various essential elements than is the ocean that life on land ought to outstrip life in the ocean by far.

However, elements contained in solid minerals are unavailable to plant life, and, consequently, in the long run, to animal life as well. The plant lives on the substances it can extract from solution in the water contained in the soil.

Since the minerals of the soil are relatively insoluble, the watery solution is a thin one indeed, and concentration factors are actually very high. That is one reason that land-based life is actually sparser

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TABLE 3

	Percent Composition of Soil	Percent Composition of Alfalfa	Concentration Factor
Phosphorus	0.12	0.706	5.9
Calcium	3.63	0.58	0.16
Potassium	2.59	0.17	0.066
Sulfur	0.052	0.104	2.0
Magnesium	2.09	0.082	0.039
Chlorine	0.048	0.070	1.5
Iron	5.00	0.0027	0.0005
Boron	0.0010	0.0007	0.70
Manganese	0.10	0.00036	0.0036
Zinc	0.0080	0.00035	0.044
Copper	0.0070	0.00025	0.036
Molybdenum	0.00023	0.00010	0.43
Iodine	0.0003	0.0000025	0.08
Cobalt	0.0040	0.0000010	0.00025

than sea-life, despite the greater apparent concentration of minerals on land than in the sea.

Furthermore, the material in the soil is not spread evenly. One region may have adequate quantities, let us say, of zinc or copper, while a neighboring region may be deficient in both, and another nearby region may have a poisonous excess of both. Any element can represent a local bottleneck to life. This is one reason that, even given plenty of sun and rain, one section of land may be less fertile than another.

To be sure, there is an extremely slow soil-homogenizing factor in the land erosion that goes on over the ages, bringing materials from mountain-tops to valleys, and in the buckling of strata and the scraping of glaciers and the upraising of mountains. In the very long run,

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then, local deficiencies and excesses don't matter. It is the overall concentration factor that matters, and there, on land as on the sea, phosphorus is the bottle-neck, as you will see if you look at the concentration factors in Table 3.

Man can take a hand, of course. He can, to the limits imposed by his technology, make up for deficiencies without waiting for geologic processes. He can transfer water from points of excess (with the ocean as the basic source) to points of deficiency. He can do the same for nitrogen (with the air as the basic source), or for calcium or phosphorus.

In doing this, man is, in a way, trying to homogenize the soil and make it more evenly fertile. He is not raising the maximum potential of fertility. The maximum mass of protoplasm which the land can support, like the maximum that the sea can support, is dictated by the phosphorus content. Phosphorus, on both land and sea, has the highest concentration factor; on both land and sea it is life's bottleneck.

Just as there is a standoff in the euphotic zone, so there is a standoff on land. The rain comes down, dissolves tiny quantities of soil, and on this solution, plants grow until all the phosphorus they can grab has been incorporated into their substance. Animals eat the plants and, in the process of living, excrete phosphorus-containing wastes upon which plant life can feed, grow and replace the amount of itself which animals have eaten.

And, just as there is a drizzle in the ocean out of the euphotic zone, so there is a drizzle out of the land. Some of the dissolved materials in the soil inevitably escape the waiting rootlets and are carried by the seeping soil-water to brooks and rivers and, eventually, to the sea.

Any one river in any one second doesn't transfer much in the way of dissolved substances from land to ocean, but all the rivers together pour 9,000 cubic miles of water into the oceans each year, and in that amount of water, even a very thin solution amounts to a lot of dissolved material.

The loss of phosphorus, since it is life's bottleneck, is most serious, and it is estimated that 3,500,000 tons of phosphorus are washed from the land into the sea by the rivers each year. Since phosphorus makes up roughly 1 percent of living matter, that means that the potential maximum amount of land-based protoplasm decreases each year by 350,000,000 tons.

Of course, there are ways in which phosphorus is re-transferred

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from sea to land, just as in the case of the ocean there is a re-transfer of phosphorus from the depths to the surface.

One type of re-transfer of phosphorus from sea to land involves bird-droppings. Some sea-birds live on fish, and nest on land. Their droppings are rich in phosphorus (derived from fish which get it from the ocean), and these sea-derived droppings cover their nesting grounds by the ton. This material, called "guano" is a valuable commodity since its phosphorus content makes it an excellent fertilizer.

However, the phosphorus returned to land in this fashion represents only 3 percent or less of that washed out to sea.

Nor does the phosphorus washed into the sea remain dissolved there. If it did, life in the sea would gradually multiply as life on land diminished and the total protoplasmic mass on Earth would remain unchanged. Unfortunately, the ocean is already holding all it can of the largely insoluble phosphates. New phosphorus washed into the sea simply precipitates out as sediment at the sea-bottom.

Of course, over geologic periods, the uplifting of sea-bottoms exposes new phosphorus-rich soil to start cycles of land-fertility over again. At the present moment, though, this long-range view won't help us. With an increasing population, we need increased fertility of the soil to stay even; steadily decreasing fertility could spell disaster.

Especially when man is deliberately accelerating the rate at which phosphorus is being lost to the sea.

This is where the new villain comes in. In all advanced regions of Earth (and more and more regions are becoming advanced) internal plumbing is coming into fashion. Elaborate sewer pipes lace cities, and phosphorus-rich wastes are flushed into the ocean.

And so soil fertility declines faster and faster as more and more phosphorus sinks to the bottom of the ocean.

Naturally, I am not suggesting that we abandon plumbing and sewers. I am used to sanitation myself and have no real affection for such as typhoid fever and cholera, which go along with lack of it.

I am suggesting, though, that as we make long range plans to cope with the inevitable disappearance of coal, oil, wood, space between people, and other valuables that are in shorter and shorter supply as population and per-capita power requirements mount steadily each year, we had better add the problem of disappearing phosphorus to the list.

We may be able to substitute fusion-power for coal-power, and plastics for wood, and yeast for meat, and friendliness for isolation, but for phosphorus there is neither substitute nor replacement.

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The following first appeared in 1883, in the Russian magazine Budilnik. *Chekhov is generally thought of as a student of the earnest and the grim, but in his early years he wrote mostly humorous pieces—such as the following hilarious parody, which purports to be a translation into the Russian of a Jules Verne space epic. It is interesting to note that among Chekhov's wry asides (which include the footnotes), there is an early affirmation of that familiar Russian claim to have done everything first. We are enormously grateful to Frances Jones for having found and translated this previously unavailable gem....*

THE FLYING ISLANDS

by Anton Chekhov

(translated from the Russian by Frances H. Jones)

Chapter 1: The Speech

"I HAVE FINISHED, GENTLEMEN!" said Mr. John Lund, a young member of The Royal Geographic Society, as he sank into an armchair, exhausted. The assembly room reverberated with wild applause and cries of "bravo!" One after another, the gentlemen went up to John Lund and shook his hand. Seventeen gentlemen, in token of their astonishment, broke seventeen chairs and sprained eight necks, belonging to eight gentlemen, one of whom was captain of "The Catastrophe," a 100,009 ton yacht.

"Gentlemen!" said Mr. Lund, deeply touched. "I deem it my most sacred duty to thank you for the amazing patience with which you have listened to my speech, lasting 40 hours, 32 minutes, and 14 seconds. . . . Tom Grouse!" he said, turning to his old servant. "Wake me up in five minutes. I'll be sleeping while the gentlemen are pardoning me for having the effrontery to sleep!"

"Yes, sir!" said old Tom Grouse.

John Lund threw back his head and was asleep in a second.

John Lund was a Scotsman by birth. He had had no formal education, taken no degrees, but he

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knew everything. His was one of those happy natures whom natural intellect leads to a knowledge of all that is good and beautiful. The enthusiasm which had greeted his speech was entirely justified. In the course of 40 hours, he had submitted a vast project for the consideration of the honored gentlemen, the fulfillment of which later was to bring great fame to England and to prove what heights can sometimes be reached by the human mind! "Boring through the moon with a colossal gimlet"—that was the subject of Mr. Lund's brilliantly delivered speech!

Chapter 2: The Mysterious Stranger

Sir Lund didn't sleep for even three minutes. A heavy hand descended on his shoulder and he woke up. Before him stood a gentleman six feet eleven inches tall, supple as a willow and thin as a desiccated snake. He was entirely bald. Dressed all in black, he had four pairs of spectacles on his nose, one thermometer on his chest, and one on his back.

"Follow me!" said the baldheaded gentleman in sepulchral tones.

"Where to?"

"Follow me, John Lund!"

"And what if I don't?"

"Then I shall be compelled to bore through the moon before you do!"

"In that case, sir, I am at your service."

"Your servant will walk behind us."

Mr. Lund, the baldheaded gentleman, and Tom Grouse left the assembly room, and set off down the well lit streets of London. They walked for a very long time.

"Sir," said Grouse to Mr. Lund, "if our journey is as long as this gentleman, in accordance with the law of friction, we will wear out our shoes!"

The gentlemen thought for a moment. Ten minutes later, having decided that Grouse's remark was witty, they laughed loudly.

"With whom do I have the honor of laughing, sir?" Lund asked the baldheaded gentleman.

"You have the honor of walking, talking, and laughing with a member of all the geographical, archeological and ethnological societies, one who has a master's degree in every science that ever existed and is now in existence, a member of the Moscow Arts Club, an honorary trustee of The Southampton School for Bovine Midwifery, a subscriber to *The Illustrated Imp,* a professor of yellow-green magic and elementary gastronomy in the future University of New Zealand, director of the Nameless Observatory, William Bolvanius. I am taking you, sir, to . . ."

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John Lund and Tom Grouse went down on their knees before the great man, of whom they had heard so much, and bowed their heads in respect.

". . . I am taking you, sir, to my observatory, twenty miles from here. Sir! Silence is a fine trait in a man. I need an associate in my undertaking, the significance of which you are capable of comprehending with the two hemispheres of your cerebellum alone. My choice has fallen on you. After your forty-hour speech, you could hardly wish to enter into any conversation with me, and I, sir, love nothing so much as my telescope and prolonged silence! Your servant's tongue, I trust, will be silenced by an order from you, sir. Long live the pause! I am taking you—You've no objections, have you?"

"None, sir! I only regret that we are not runners and that the shoes we are wearing cost money."

"I'll buy you new shoes."

"Thank you, sir."

Those of my readers who are ablaze with desire to become better acquainted with Mr. William Bolvanius can read his amazing work, "Did the moon exist before the flood? If so, why didn't it drown?" To this work is appended a banned brochure published a year before his death and entitled "How to turn the universe into dust and escape with one's life at the same time." These two works convey the personality of this most remarkable of men better than anything else could do.

Incidentally, they describe how he spent two years in the swamps of Australia, subsisting entirely on crabs, slime, and crocodile eggs, and never once saw a fire. While in the swamps, he invented a microscope exactly like our ordinary microscope and discovered the spinal column of fish of the species "Riba." On returning from his long journey, he settled a few miles outside of London and devoted himself entirely to astronomy. Being a real mysogynist (he was married three times and thus had three splendid, branchy pairs of cuckold's horns) and having no desire for occasional openness, he led an esthetic life. With his subtle, diplomatic mind he contrived that the observatory and his work in astronomy were known to himself only. It is the regret and misfortune of all right-thinking Englishmen that this great man did not live until our time. He died quietly last year, swallowed by three crocodiles while swimming in the Nile.

Chapter 3: The Mysterious Spots

The observatory where he took Lund and old Tom Grouse . . . (a lengthy and extremely dull description of the observatory follows, which, to save time and

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space, your French-Russian translator thought best not to translate.) There stood the telescope perfected by Bolvanius. Mr. Lund went over to the telescope and began looking at the moon.

"What do you see, sir?"

"The moon, sir."

"But what do you see near the moon, Mr. Lund?"

"I have the honor of seeing the moon alone."

"But don't you see some pale spots moving near the moon?"

"Egad, sir! I do see those spots! I'd be an ass if I didn't! What kind of spots are they?"

"Those are spots which are visible only through my telescope. But enough! Stop looking through the telescope! Mr. Lund and Tom Grouse, I want to know, I must know what those spots are! I'll be there soon! I'm going to take a trip to see them! You will follow."

"Hoorah! Long live the spots!" cried John Lund and Tom Grouse.

Chapter 4: Catastrophe in the Sky

A half hour later, Mr. William Bolvanius, John Lund, and Tom Grouse, the Scotsman, were flying towards the mysterious spots in a cube that was borne aloft by eighteen balloons. It was hermetically sealed and had compressed air and equipment for making oxygen.[1] The start of this stupendous, unprecedented flight took place on the night of March 13, 1870. The wind was from the south-west. The compass needle pointed Nww. (An extremely dull description of the cube and the eighteen balloons follows.) Deep silence reigned in the cube. The gentlemen huddled in their capes and smoked cigars. Tom Grouse, stretched out on the floor, slept as though he were in his own home. The thermometer[2] registered below zero. In the course of the first twenty hours, not a word was spoken and nothing particular occurred. The balloons had penetrated into the cloud region. Some lightning bolts began chasing the balloons, but didn't overtake them, as they belonged to an Englishman. The third day John Lund came down with diphtheria and Tom Grouse had a bad attack of spleen. The cube collided with an aerolith and received a terrible bump. The thermometer registered −76°.

"How are you feeling, sir?" Bolvanius asked Sir Lund on the fifth day, breaking the silence at last.

"Thank you, sir," replied Lund, touched. "Your interest touches me. I'm in agony. But where is my faithful Tom?"

[1] A gas invented by chemists. They say it's impossible to live without it. Nonsense. Money's the only thing one can't live without.

[2] There actually is such an instrument. (French-Russian translator's note.)

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"He's sitting in the corner, chewing tobacco, and trying to look like a man who married ten wives at once."

"Ha-ha-ha, Sir Bolvanius!"

"Thank you, sir!"

Mr. Bolvanius hadn't had time to shake hands with young Lund before something terrible occurred. There was a frightful crash. Something exploded, a thousand cannon shots resounded, a rumbling and a furious whistling filled the air. The copper cube, having reached the rarefied atmosphere and being unable to withstand the internal pressure, had exploded, and fragments of it had shot into endless space.

This was a terrible moment, unique in the history of the universe!

Mr. Bolvanius grabbed Tom Grouse by the legs, the latter grabbed John Lund by the legs and the three of them were borne like lightning into a mysterious abyss. The balloons came loose. No longer weighed down, they circled and then exploded with a bang.

"Where are we, sir?"

"In the ether."

"H'm. If we're in the ether, what are we going to breathe?"

"Where is your will power, Sir Lund?"

"Sirs!" shouted Grouse. "I have the honor to inform you that for some reason we're flying upwards, not downwards!"

"Bless my soul, so we are! That means we're no longer in the sphere of gravity. Our aim is pulling us toward our goal! Hoorah! Sir Lund, how are you feeling?"

"Thank you, sir. I can see the Earth above, sir!"

"That's not the Earth. It's one of our spots. We're going to crash into it this second!"

BOOM!!!

Chapter 5: Johann Goth's Island

Tom Grouse was the first to regain consciousness. He rubbed his eyes and began examining the territory on which he, Bolvanius, and Lund were lying. He removed one of his socks and began rubbing the gentlemen with it. The gentlemen came to at once.

"Where are we?" asked Lund.

"On one of the islands belonging to the group of Flying Islands! Hoorah!"

"Hoorah! Look up there, sir. We've outdone Columbus."

Several more islands were flying above the island (a description follows of a picture comprehensible only to the English). They began exploring the island. It was --- long and --- wide. (Numbers, numbers, a pox on numbers!) Tom Grouse succeeded in finding a tree whose juice tasted just like Russian vodka. Strangely enough, the trees were lower than the grass. (?) The

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island was uninhabited. No living creature had set foot on it.

"Look, sir, what's this?" Mr. Lund asked Sir Bolvanius, picking up a sheaf of papers.

"Strange . . . surprising . . . astounding . . ." muttered Bolvanius.

The papers proved to be announcements made by a man called Johann Goth, written in some barbaric language; Russian, I think.

"Curses!" yelled Mr. Bolvanius. "Someone's been here ahead of us! Who could it have been? Curses! Oh, thunderbolts from heaven, bash in my mighty brain! Let me get my hands on him! Just let me! I'll swallow him whole!"

Mr. Bolvanius, throwing up his arms, laughed wildly. A strange light shone in his eyes.

He had gone mad.

Chapter 6: The Return

"Hoorah!" shouted the inhabitants of Havre, crowding every inch of the quayside. The air rang with joyous shouts, bells, and music. The black mass which had been threatening them all with death was descending into the harbor, and not onto the city. The boats hurriedly made for the open sea. The black mass which had hidden the sun for so many days, to the exultant shouts of the people and thundering music, plopped heavily (pesamment) into the harbor and splashed the entire quayside. Thereupon it sank. A minute later every trace had vanished, except for waves that furrowed the surface in all directions. Three men were floundering in the middle of the harbor—the crazed Bolvanius, John Lund, and Tom Grouse. They were quickly taken aboard small boats.

"We haven't eaten in fifty-seven days!" muttered Mr. Lund, thin as a starving artist, and then related what had happened.

Johann Goth's island no longer exists. The weight of the three brave men had made it heavier. It left the neutral zone, was drawn towards the Earth and sank in the Harbor of Havre.

Conclusion

John Lund is now working on the question of boring through the moon. The time is close at hand when the moon will be graced by a hole. The hole will belong to the English. Tom Grouse lives in Ireland now and has taken up farming. He raises hens and beats his only daughter, whom he is bringing up along Spartan lines. Scientific questions still concern him: he is furious at himself for not bringing back any seeds from the tree on the Flying Island whose juice tasted just like Russian vodka.

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Clint was young and tough and strong, and he felt no need of charms to protect him from any Ozark belle . . . even though the moon was full, and Marie-Elaine proved to be inhumanly beautiful . . .

the amulet

by Gordon R. Dickson

HE HAD HIT THE KID TOO HARD, there, back behind the tool shed—that was the thing. He should have let up a little earlier, but it had been fun working the little punk over. Too much fun; the kid had been all softness, all niceness—it had been like catnip to a cat and he had got all worked up over it, and then it had been too late. It had just been some drippy-nosed fifteen-year-old playing at running away from home, but the railroad bulls would be stumbling over what was left, back of the toolshed, before dawn.

That was why Clint had grabbed the first moving freight he could find in the yards instead of waiting for the northbound he was looking for. Now that the freight had lost itself in the Ozark back-country, he slipped out of the boxcar on a slow curve and let the tangled wild grass of the hot Missouri summer take the bounce of his body as it rolled down the slope of the grading.

He came to a stop and sat up. The freight rattled by above him and was gone. He was a little jolted, that was all. He grinned into the insect-buzzing hush of the late afternoon. It took a young guy in shape to leave a moving freight. Any bum could hook on one. He considered his own blocky forearms, smooth with deep suntan and muscle, effortlessly propping him off the soft, crumbling earth; and he laughed out loud on the warm grass.

He felt cat-good, suddenly. Cat-good. It was the phrase he had for himself when things turned out well. Himself, the cat, landed on his feet again and ready to make out in the next back yard. What would the suckers be like this time? He rose, stretching and grinning, and looked over the little valley before him.

Below the ridge, it was more a small hollow than a true valley. The slope of the ridge came down sharp, covered with scrub pine, and leveled out suddenly into a

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little patch of plowed earth, just beginning to be nubbly with short new wands of grain. A small, brown shack sat at one end of the field, low-down from where he stood now, and in its yard an old granny in an ankle-length black skirt and brown sweater was chopping wood. He could see the flash of her axe through the far, clear air, and the *chop* sound came just behind. And for a moment, suddenly, for no reason at all, a strange feeling of unquiet touched him, like a dark moth-wing of fear fluttering for a second in the deep back of his mind. Then he grinned again, and picked up his wrinkled suitcoat.

"Ma'm," he said in a soft shy voice, "Ma'm, could I get a drink of water from you, please?"

He chuckled, and went down the dip toward the field with easy, long-swinging strides. She was still chopping wood when he came into the yard. The long axe flashed with a practiced swing at the end of her thin, grasshopper-like arms, darkened by the sun even more deeply than his own. The axe split clean each time it came down, the wood falling neatly in two equal sections.

"Ma'm . . ." he said, stopping a few feet off from her and to one side.

She split one more piece of wood deliberately, then leaned the axe against the chopping block and turned to face him. Her face was as old as history and wrinkled like the plowed earth. Her age was unguessable, but a strange vitality seemed to smoulder through the outer shell of her, like a fire under ashes, glowing still on some secret coal.

"What can I do for you?" she said. Her voice was cracked but strong, and the *you* of the question came out almost as *ye*. Yet her dark, steady eyes, under the puckered lids, seemed to mock him.

"Could I get a drink of water, ma'm?"

"Pump's over there."

He turned. He had seen the pump on the way in, and purposely entered from the other side of the yard. He went across to it and drank, holding his hand across the spout to block it so that the water would fountain up through the hole on top. He felt her gaze on him all the time he drank; and when he turned about she was still regarding him.

"Thank you, ma'm," he said. He smiled at her. "I wonder—I know it's a foolish question to ask, ma'm—but could you tell me where I am?"

"Spiney Holler," she said.

"Oh, my," he said. "I guessed I'd been going wrong."

"Where you headed?" she asked.

"Well—I was going home to Iowa, ma'm." His sheepish grin bared his foolishness to her laugh-

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ter. "I know it sounds crazy. But I thought I was on a freight headed for Iowa. I was going home."

"You live in Iowa?"

"Just outside Des Moines." He sighed, letting his shoulders slump. "Can—can I sit down, ma'm? I'm just beat—I don't know what to do."

"A big chunk like you? Sit down, boy—" her lean finger indicated the chopping box and he came across the yard as obediently as a child and dropped down on it. "How come you're here?"

"Well—" he hung his head. "I'm almost ashamed to say. My folks, they won't ever forgive me. I tell you, ma'm, it's about this pain in my side."

He felt, rather than saw, a dark flicker of interest in her eyes, but when he looked up, her wrinkled face was serene.

"—this pain, ma'm. I had it ever since I was a little kid. The doctors couldn't do nothing for it. And then, my cousin Lee—he's a salesman, gets all over—my cousin Lee wrote about this doctor in St. Louis. Well, the folks gave me the train fare and sent me down there. I got in on a Saturday and the doctor, he wasn't in his office. So I went to this hotel."

He looked at her. She waited, the little breeze blowing her skirt about her.

"Well, ma'm—" he faltered. "I know I should have known better. I was brought up right. But I got sick of that little hotel room and I went out Saturday night to see what St. Louis looked like and—well, ma'm, I got into trouble. It was liquor that did it—unless they put something in my drink—anyway, I woke up Monday morning feeling like the wrath of God and all my folk's money gone." He heaved a groaning sigh.

"And you ain't never going to do it again."

The open sneer in her voice brought his head up with a jerk. She stood, hands on hips above the tight-tucked skirt, grinning down at him. Sudden wrath and fear flamed up in him, but he hid them with the skill of long practice.

"Boy," she said. "You came to the wrong door with your story—set down!" she said sharply, as he started to rise, a wounded expression on his face. "You think I don't know one of old Scratch's people when I meet 'em? Me—out of 'em all? Now how'd you like a drink?"

"A drink?" he said.

She turned and walked across to the half-open door of the house and came back with a fruit-jar, partly filled. She handed it to him. He hesitated, then gulped. Wildcats clawed at his gullet.

She laughed at the tears in his eyes and took the jar from him.

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She drank in her turn, without any visible reaction, as if the liquid in the jar had been milk. Then she set the jar on the ground and fished a pack of cigarets from her pocket. She lit herself one, without offering them to him, and stood smoking, gazing away over his head, out over the fields.

"I sent for someone last Tuesday when my Charon was spoiled," she said, musingly. "You can't be nobody but him."

He stared up at her, feeling as if his clothes had been stripped off him.

"You crazy?" he demanded roughly, to get a little of his own back. "You nuts or something?" She turned and grinned at him.

"Well, now, boy," she said. "You sound like you'd be some great comfort to a lone old woman on long winter nights and nothing to do. Quiet!" she snapped sharply, as he opened his mouth again. "Come on in the cabin with me," she said. "I got to check on this."

Warily, confused by a mixture of emotions inside him, yet curious, he rose and followed her in. The interior of the small house was murkily dark, a single room. Some straight-backed chairs stood about a polished wood floor decorated with throw rugs. There was a fireplace and a round-topped, four-legged table. The corners had things in them, but there the shadows were too deep for his sun-dazzled eyes to see. He thought he smelled cat, but there was no cat to be seen; only an owl—stuffed, it seemed—on the mantel over the fireplace.

She bent over. There was the scratch of a match and a candle sputtered alight, illuminating the tabletop and her face, but throwing the rest of the room deeper into darkness. A strange thrill trembled down his spine. He stared at the candle. It was only a candle. He stared at her face—but for all its strangeness, it was only a face.

"Money," she said. "That's what you think you want, eh, boy?"

"What else is there?" he retorted; but the loud notes of his voice rang thin at the end. She burst suddenly into harsh laughter.

"What else is there, he says!" she cried to the room about them. "What else?" The candle flared suddenly higher, dazzling him for a moment. When he could see again, he discovered two things on the table before him. One was a circle of leather string—like a boot shoelace with a small sack attached—and the other was a thin sheaf of twenty-dollar bills, crisp and new, bound about by a rubber band. He looked at the money and his mouth went dry, estimating there must be two or three hundred dollars in the stack. His

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hand twitched toward it; and he looked up at the old woman.

"Look it over, boy," she said. "Go ahead. Look at it."

He snatched it up and riffled through the stack. There were fourteen of the twenties. His eyes met hers across the table. He noticed again how thin she was, how old, how frail. Or was she frail?

"Only money, boy?" she sneered at him. "Only money? Well, then you got no trouble. You just run me an errand and all that's yours —and as much again when you come back!"

Still he stood, looking at her.

"You want to know?" she said. "I'll tell you what you got to do for that money. You just go get my recipe book from my neighbor, Marie-Elaine."

His voice came hoarse and different from his throat.

"What's the gag?" he said.

"Why, boy, there's no gag," she said. "I done lent my recipe book to Marie-Elaine, that's all, and I want you to fetch it for me."

He considered, his mind turning this way and that like a hunting weasel; but each way it looked there was darkness and the unknown.

"Where does she live?" he asked.

"Her? Over the ridge." She looked at him and leaned toward him across the candle and the table. "Money, eh, boy? Just money?"

"I say—" he gasped, for the smoke of the candle came directly at him, almost choking him. "What else is there?"

"Something else, boy." Her eyes held him. They were all he could see, shining in the darkness. "Something in particular for you, boy, if you want it. You did a fine, dark thing last night; but it's not enough."

"What you talking about?"

"Talking about you. Marie-Elaine, she borrowed my book and my Charon; but she spoiled my Charon. Now she got to get me another, or I take her Azael—don't know what I'm talking about, do you, boy?"

"No—" he gasped.

"I got to play fair with you. Them's the rules. So you take up that amulet there afore you and wear it. No business of mine, if Marie-Elaine can get you to take it off. None of my doings, if you open the book."

His hand went out as if of its own will and picked up the string-and-sack. An odd, sour smell from it stung his nostrils.

"Why'd I want to open your book?" he managed.

"For the pride and the power, boy, the pride and the power." The candle flame flared up between them, blinding him. He heard her, intoning. "Once by call of flesh—once by burn and rash—once by darkness—she'll try you boy. But wear the amulet spite of her and me and the book won't

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tempt you. There, I've given you fair warning."

The candle flame sank to ordinary size again. Sight of the room came back to him. She stood watching him, a slight grin on her face.

He hesitated, standing with the limp, oily leather of the string in his hand. He had feelings about bad spots when he was getting into them—he'd been in enough. Cat-wise, he was. And there was something about this that was whispering at him to get out. Or was it just the moth-wing of fear he had felt as he looked over this hollow? He believed in nothing, not even in witches; but—all that money for a book—and not believing meant not disbelieving . . . and that made everything possible. If witches were so— A shiver ran down his back; but hot on it came the sullen bitter anger at this old granny who thought she could use him—*him! I'll show her,* he thought; and the blood pounded hot in his temples. He shoved the bills into his pocket, lifted the amulet, hung it around his neck, and tucked it out of sight into his shirt.

"Yeah. Leave it to me," he said. She laughed.

"That's the boy!" she crackled. "You can't miss it when you see it. A black book with a gold chain and a gold lock to the chain. You'll see it in plain sight. She's got no blindness on you."

"Sure," he said. "I'll get it."

He backed away, turned, and went out the door. He came out into rich, late sunlight. It lay full on the fields; and, in spite of the fact that it was near to sunset, he had to shut his eyes for a moment against its brilliance after the darkness inside.

He turned to the ridge, towering up black with scrub pines above him. A dusty footpath snaked off and up from the cabin and was lost. He was aware of the old woman watching from her cabin door.

"See you," he said, and flipped a hand at her in farewell. But she did not answer; and he turned sullenly away, burning, burning with his resentment.

The first cool breath of dying day filled his lungs as he climbed. He felt the goodness of being alive; and the money was comfortably pressed against his thigh —he could feel it through his pocket with each step up the ridge. But the sourness that had come upon him in his encounter with the old witch stayed with him. The path wound steeply, sometimes taking half-buried boulders like stone steps upward. It had not looked like a very high ridge; but the sun was barely above the horizon when he reached the top.

He stopped to catch his breath and consider whether he should

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go on, or take the money and cut back to the tracks. Another freight would come soon. Below him, down the way he had come, the shadows were long across the fields of the old woman and the slow curve of the railroad right of way. Before him, the further hollow was half in the shadow of the ridge, and only a small house, very like the old woman's but neater-looking with a touch of something colorful at the windows, stood free of the dark. A sudden thrill of something that was fear, but yet was not fear, ran through him as he stood above the low lands, drowning in the last of the twilight. This was country for witches. He could feel belief coming up into him from the earth under the soles of his surplus army boots. Something evil burnt in the far redness of the descending sun; and the growing breeze of night came out of the shadow of the pines and caressed his cheek with cool, exciting fingers of darkness.

He began with an odd eagerness to scramble down the path along the far side of the ridge. He seemed to go rapidly, but the further hollow was all in twilight by the time he emerged from the pine trees into its open pasture. Overhead, the sky was blood-red with sunset and the roof of the house was tinged with its ochre reflection. A little light glowed yellow behind its windows.

He crossed the meadow and stumbled unexpectedly into a small stream. Wading across, he came up a further slight slope and into the yard of the house. When he was still a dozen feet from the door, it opened; and a woman stood suddenly revealed in silhouette, with the gloaming now too feeble to illuminate her face and the lamp light strong behind her.

He came up to the steps; and as he did so, something large and grey flitted by him and disappeared through the open doorway. It had looked almost like an owl, but the young woman seemed to pay it no attention. He looked up the steps. There were three of them; and they put her head above his own. She was quite young; and her thin, summer dress clung to the close outline of her, revealing a slim, tautly proportioned body.

He stopped, looking up at her.

"Hi," he said. "Say—" a sudden cunningness stilled his tongue as it was about to mention the book he had been sent for—"say, I seem to be lost. Where am I?"

"Not far from Peterborough," she said. She had a low, huskily musical voice. "Come in."

He walked up the steps and she stepped back before him. A light scent of some earthy perfume came to his nostrils and reminded

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him all at once of how he was a man and this was a woman. The lamplight, as in the old woman's house, blinded him for a second. But he recovered quickly; and when he looked up, it was to see her regarding him from beyond a small table not unlike that other, although this was smaller. There was no owl to be seen. This room, like that in the old woman's house was full of shadows, the main difference being a large yellow cat that sat before a fireplace in which a small fire was burning against the quick coolness of evening. On the mantelpiece above it was a large black book with a gold chain around it, secured by a small gold lock. All this he saw in a glance, but it registered as nothing on his mind compared to the lamplit sight of the young woman.

He had never expected to find her beautiful.

She was tall for a woman, and sheer grey eyes looked at him from under slim black brows. Her hair was the color of the deepest shadows and dropped thickly to curl in one smooth dark wave about her slim shoulders. Her lips had their perfect redness without lipstick and the line of her jaw was delicately carved above the soft column of her neck. Her body was the kind men dream of.

"You're Marie-Elaine," he said, without thinking.

"They call me Marie-Elaine," she nodded.

"You've got a crazy neighbor over the ridge there," he said. "She—" caution suddenly placed its hand on his tongue—"told me your name—but she didn't tell me anything else about you." His voice came out a little thickly with the feeling inside him.

She laughed — not as the old woman had laughed; but softly and warmly.

"She's old," Marie-Elaine said. "She's real old."

"Hell, yes!" he said, continuing to stare at her. And then, slowly, again, he repeated it. "Hell . . . yes . . ."

"You're a stranger," she said.

"Call me Bill." He looked at her across the table. "I was hitching a ride on a freight and the brakeman saw me. I had to drop off by the old lady's place. I got a drink of water from her. She said it was this way to town."

"You must be tired." Her voice was as soft as cornsilk.

"I'm beat out."

"Sit down," she said. "I'll make some coffee."

"Thanks."

He looked about and saw a chair on two slim rockers, spindle-backed and with a thin dark cushion on the seat of it, standing beside the fire. He crossed and sat down in it gingerly—it held. There was a sound of water splashing; and Marie-Elaine came

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across the room with a kettle. She crouched on the opposite side of the fireplace to swing out a metal arm, hooked at the end, and suspend the kettle from the hook, over the flames. The red flickering light lit up the smooth line of her body all down the clean curve of back and thigh — and the wild blood stirred within him.

"What's Peterborough like?" he said, to be saying something.

"It's a town," she answered. Straightening up, she turned her head and smiled at him, a smile as red as the flames of the fire. "A small town. Strangers don't come, often."

"You like it that way?" he asked, boldly.

"No," she said softly, looking at him. "I like strangers." He felt his heart begin to pound slowly and heavily. "What'd she say about me?"

"Who?" he blinked at her. "Oh, the old bag? Not much." He spread his hands to the fire's warmth. "I didn't get the idea she liked you too well, though."

"She doesn't," Marie-Elaine said. "She hates me. And she's lost her Charon."

"Some of those old bags are that way."

It was a crazy conversation. He checked an impulse to shake his head and clear it. He could talk to a woman better than this. A clink of metal reached his ears. She was lifting the kettle off the hook. Was it boiling already? She carried it away to the further shadows.

He was aware of eyes watching him; and looked down to discover it was the cat. Tall and tawny, it sat upright before the fire, staring at him. Its eyes, half-closed, seemed dreamily to be passing judgment upon him.

"You live here all by yourself?" he asked.

"All by myself." Her voice came back to him and he peered into the dimness, trying to make her out. "Did she warn you about me?"

"Warn?" he said. The cat moved suddenly. He heard the soft sound of paws on the floor and it bounded into his lap. He jumped at the weight of it, then raised his hand to pet it. But it wrinkled its nose suddenly — and spat — and leaped back to the floor again.

"Warn?" he said. "No. What for?"

Marie-Elaine laughed.

"Just talk," she said. She came walking out of the shadows into the firelight, an odd-looking earthenware coffeepot in one hand and two black china cups in the other. She sat down on the settle opposite him, filled both cups and handed one across to him. He took it, hot in his hand.

"How come she's got it in for you?" he asked.

"Oh, it's business," she smiled a cat's creamy smile across the

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small flame-lit distance between them. "We sell our wares to the same people."

"Yeah," he said. "Your looks wouldn't have anything to do with it?" He watched her to see how the compliment registered. She tilted her face, framed by the dark hair, a little to one side and her shadowed eyes heated his blood.

"My looks?" she murmured.

"You're a doll," he told her, in that sudden harsh voice that usually worked so well for him with women. Her smile widened a little. That was all. But enough.

"Do you want some more coffee?" she asked.

"Pour me." He held out the cup. Her fingers caught and burned against his hand, holding it as she poured the brown liquid into his cup.

"Milk and sugar?" she said.

"Black." He shook his head and drank. The coffee was like nothing he had ever tasted before. Delicious. Staring at the curving china bottom, he realized he had drunk it all without taking his lips from the cup.

"More?" He nodded, and she poured again. He held the cup this time without drinking, warming both hands around it; and looked at her over it. With the coffee in him, the fire seemed brighter and she—standing before him, she had not moved, but now as he watched she seemed, without moving a muscle, to float nearer and nearer, calling to all his senses. His head swam. He smelled the wild, faint savor of her perfume; and, like the candle in the old woman's house, she blotted out everything.

"Tell me—" It was her voice, coming huskily at him.

"What?" he said, blindly staring.

"Would you do something for me?"

"Something? What?" he said. He would have risen and gone to her, but the amulet anchored him like some great weight around his neck.

"You shouldn't ask what," she breathed. "Just anything."

His head spun. He felt himself drifting away as if in some great drunkenness. "You got to tell me first—" he gasped.

Suddenly the enchantment was gone. The room was back to normal, and she was turning away from him with the coffeepot. He leaned a little forward in his chair, toward her, but something had come between them.

"They got a hotel in Peterborough?" he asked.

"No hotel," she shrugged, replacing the coffeepot. "Sleep here," she said indifferently. His chest itched suddenly; and, reaching up to scratch it, his fingers closed around the amulet, through his shirt. Hastily, he dropped his hand again.

"Well, that's nice of you," he

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said. "I sure appreciate that." The words came out clumsily, and he gulped his second cup of coffee to cover the excitement and confusion in him. The amulet, now that he had noticed it was itching and burning like a live thing. There must be something in it that he was allergic to. He had got all puffed up from poison oak once, on a picnic. When he looked up from the coffee, he saw she was on her feet.

"Here," she said. She picked up the lamp from the table and it lit up a bed against the wall beyond her. "This is where I sleep. But I've another—over here." And she crossed the room, the shadows rolling back before her until against the opposite wall he saw a narrow bunk built of heavy wood and with slats across it, peeping out from under the edges of an old mattress. "I'll get you some bedding."

She turned and went toward a dark door opening in the rear wall of the room. The cat meowed suddenly from near the front door and she spoke over the shoulder. "Let him out for me." Then she had vanished through the rectangle of darkness.

He got up, feeling the relief as the amulet swung out and away from contact with his skin. He walked across to the door, and opened it.

"Here, cat," he said.

It did not come, immediately. Peering through the dimness, he discovered suddenly its green eyes staring at him, unwinkingly. "C'mon! Cat!"

The cool night air blew through the doorway into his face, chilling and antiseptic. Standing with his back to the inner room, he fumbled open the top buttons of his shirt and pulled the little weight of the amulet out. The fire flickered high for a moment behind him, painting the bare wooden door ajar before him and reflecting inward. Looking down, he saw a great, furious rash on his skin where the amulet had rested.

He heard the old witch again, in the back of his mind, chanting *—once by call of the flesh, once by burn and rash*—Sudden fury exploded in him. Did she think she'd frightened him with stuff like that? Did she think he wouldn't dare—?

He yanked, snarling, at the amulet. The cord broke; and he tossed it into outer darkness.

Sudden relief washed over him —and on the heels of it, suddenly, the night became alive. With a thousand voices, whispering, its clamor surged around him, advising him, counseling him, tempting him. But he was too sharp now to be tricked, too wise to be betrayed. Clever, clever, his mind curled and twisted and coiled about on itself like a snake hungry in the midst of plenty and waiting

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only to make its choice. The heat of his body was gone now, all the lust of his flesh for Marie-Elaine, and only the shrewd mind was left, working. He would show them. He would show them both.

He became aware, suddenly, that he was still standing in the open doorway.

"Cat?" he said. The green eyes had disappeared. He turned back into the house, closing the door behind him. She was fixing his bed.

"You let Azael out?" she asked.

"Yes," he said. Something better than her, he thought, looking at her—something better here for me. I'll show you, who can handle who, he thought. She was smiling at him, for no reason he could see.

"Don't be hasty," she said, looking at him.

"Who's hasty?" he said.

"Not you," she said. And she had slipped away from him suddenly into the shadows around her bed.

"Turn out the lamp," her voice came back to him. His fingers fumbled with the hot little metal screw; and the brilliant, white-glowing mantel faded. He looked across again at the darkness where she lay, but the firelight danced like a bar between them.

He stepped backwards to his own bed and sat down on its hard, quilted surface. He took off his shoes and socks, listening for the sounds of her undressing—but he heard nothing. He slid in under the covers, still wearing pants and shirt—but after he was covered he thought better of it and stripped off his shirt and dropped it over the side of the bed, leaving his chest naked to the quilt.

He lay on his back, waiting for sleep. But he could not sleep.

The fire danced. He felt at once drugged from the coffee and quiveringly awake. With the throwing away of the amulet, a weird lightness and swiftness of thought had come upon him, and a sense of power. Witches or women, he thought, they couldn't match him. Women or witches . . . almost he laughed out loud in the darkness at the irresistible fury of his galloping thoughts. The events of the day flickered like a too-swift film before his eyes. He saw the kid, the freight, the old woman over the ridge. Again he climbed the stony, wooded slope and stood at its top, feeling the evil in the sunset. But now he no longer wondered about it. He accepted it, feeling it echo back from some eager sounding-board within him.

The dark fish of his thoughts swam in the black flood of the silent hour surrounding him. The keen edge of his desire for Marie-Elaine, her woman-flesh, was gone. Now something deeper, further, stronger, attracted him. It was a taste, a feel, a hunger, a satisfaction—like that which the

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business of beating up the kid had brought him. It was as if a mouth within him whose presence he had never suspected, had now suddenly opened and was crying to be fed. Somewhere about him, now, was the food that would satisfy it, the drink that would slake it. He lay still in the darkness, listening.

From the far side of the room came the soft and steady breathing, a woman in sleep . . . His wide eyes roamed the blackness; and, as he watched, the room began to lighten.

At first he saw no reason for this brightening. And then he saw the faint outline of the room's two windows taking dim ghost-shape amidst the dark; and, gazing through the nearest one, he saw that the moon was rising above the ridge. It's cold-metal rim was just topping the crest of brush and rock; and he saw light spill like quicksilver from it, down the slope, picking out the points and branches of the dark pines.

He gazed back into the room. Dim it still was, all steeped in obscurity; but by some faint trick of the light, the book on the mantel lay plainly revealed against the wall's deep shadow. Its gold chain lustered in the gloom with some obscure element of reflected light.

The hunger and thirst came up in his throat. He felt a need to do great things, and a feeling of wild joy and triumph swung him from the bed. He stood upright in the room, then swiftly stooped to gather up socks, shoes, shirt and suitcoat and put them on. When he was ready to leave, the book lying above the mantelpiece drew his eye again, like a cask of gold. In three long strides he crossed the room to it and tucked it under his arm. It was heavy—heavier than he had thought; but he could have carried a dozen like it easily, with the wild energy now possessing him.

He went swiftly to the door, opened it a crack, and slipped out into the night. The moon was out, and it was like stepping into another day that was just the negative of the film that sunlight would print when the dark hours ended. Cold light flooded the low places and the hills, and before he had taken a dozen steps from the cabin his eyes had adjusted and he was at home in the night.

He went quickly, seeming to swim through it effortlessly on tiptoe and with the sharpness of the cool air in his lungs, a drunken headiness came on him. The book felt rich with its heaviness under his arm. A warmth from its thick leather binding seemed to burn through his shirt and side, infecting him with a strange and bright-fevered heat. He pressed its shape closer to him, so that the beating of his heart echoed back from it, giving blow for blow. Now running, he went up the ridge be-

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tween the two hollows with their cabins—but all he did was without effort, as if this was no steep slope, but a plain. And at the top of the ridge he paused—not because he was out of breath, but because he had the book now, *and* the money, and the railroad tracks lay there before him in the moonlight and another freight would be along before the dark was gone. He had won, but at the same time, something pulled at him; and he was reluctant to go.

He stood, irresolute on top of the ridge. The night wind blew coldly in his face; and suddenly the fever that had brought him this far faded out of him, leaving him abruptly cold and clear-headed as if he had just risen from a long night's sleep.

Stunned, dismayed, deprived, he stood blinking. What had happened?

The plain earth, the plain moonlight, and the plain wind, gave him no answer. The dark magic that had lived in them was abruptly gone, snatched away from him as if it had never been; and he stood alone at night on an Ozark ridge with a worn and ancient book in his hands. With fingers that trembled, he tucked the book under one arm and reached into his hip pocket. Stiff paper crackled in his grasp; and he drew it forth to stare at it in the moonlight, slim twenty dollar bills.

"Money!" he muttered. And then, yelling out suddenly in furious disappointment and anger, "*Money!*" he flung it all suddenly from him, far and wide into the night wind. The bills fluttered, darkly falling in the moonlight, lost among the shadows of the two slopes. Snatching the book from under his arm he held it before him, closed, in both hands, heavy and warm from the heat of his body—in both hands. Was this it? Was this the way to their rich and secret life?

His heart beat. In the depths of the hollow behind him, the cabin of Marie-Elaine sent small wisps of smoke from its chimney. Before him the cabin of the older witch lay in equal silence and lightlessness. Under the night sky, they and the whole countryside seemed to beat and shimmer to the beating of his own heart—and to the reverberations of some mighty soundless drum, now far off, but waiting. The book burned his fingers.

"Why not?" he murmured. "Why not?" Slowly his one hand closed over the edge of the book's cover. The taste that had been in his mouth as he clubbed the kid behind the toolshed was with him again. The red fire of the hearth played once more over the curves of the crouching Marie-Elaine. These waited for him behind the cover of the book. He wrenched it open.

Black lightning leaped from the

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page before him, and blinded him. He staggered back, dropping the book, yet crying out in ecstasy. Blinded, he groped for it on all fours on the ground, mewing.

The distant drumming grew louder. The drummer approached. The landscape melted in the moonlight, swimming around him. He was aware of strange perfumes and great things moving. He crawled in the shadow of a robe and the two witches were somehow present, standing back. But the blindness hid the book from him like a curtain of darkness, and out of that curtain came a Question.

"Yes!" he cried eagerly, yearningly.

And the Question was asked again.

"Yes, yes—" he cried. "Anything! Make me the smallest, make me the littlest—but make me one of you!"

And once more, the Question . . .

"I do!" he cried. "I will! Forever and ever—"

Then the darkness parted, accepting him. And, even as he looked on the beginning of his road, he felt himself dwindling, shrinking. For one last moment it came back to him, the big-muscled, sunburned arms and the proud body, lithe and clean, the strength and the freedom; and then his limbs were narrowed to bone and tendon, to thickset fur, his belly sucked in, and his haunches rose and a tail grew long.

And the two witches shrieked and howled with laughter. They stood like sisters, arm in arm, sisters in malice, filling the night sky with their raucous, reveling laughter.

"Fool!" screeched the old one, letting go the other and swooping forward to fasten a leach and collar about his hairy cat's neck. "Fool to think you could match your wits with ours! Now you are my Charon, to fetch and run, an acolyte to our altars. Fool that was once a man, did you think to feed before you had waited on table?"

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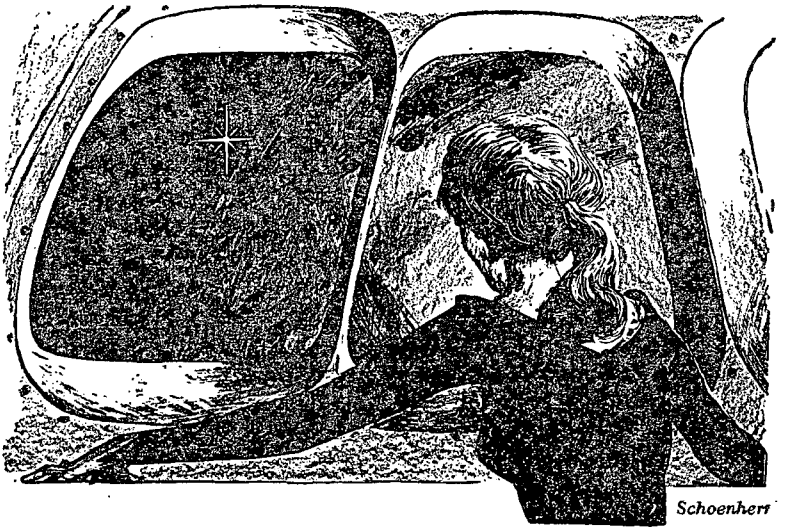

Anne McCaffrey is an avid opera fan, and it is conceivable that the soaring music with which she is so familiar inspired in part the soaring nature of this story of tension and love and danger in deep space—her first published work. We doubt that it will be her last...

THE LADY IN THE TOWER

by Anne McCaffrey

WHEN SHE CAME STORMING TOward the station, its personnel mentally and literally ducked. Mentally because she was apt to forget to shield. Literally because the Rowan was apt to slam around desks and filing cabinets when she got upset. Today, however, she was in fair command of herself and merely stamped up the stairs into the tower. A vague rumble of noisy thoughts tossed around the first floor of the station for a few minutes, but the com-

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puter and analogue men ignored the depressing effects with the gratitude of those saved from greater disaster.

From the residue of her passage, Brian Ackerman, the stationmaster, caught the impression of intense purple frustration. He was basically only a T-9, but constant association with the Rowan had widened his area of perception. Ackerman appreciated this side effect of his position—when he was anywhere else but at the station.

He had been trying to quit Callisto for more than five years, with no success. Federal Telepathers and Teleporters, Inc., had established a routine regarding his continuous applications for transfer. The first one handed in each quarter was ignored; the second brought an adroitly worded reply on how sensitive and crucial a position he held at Callisto Prime Station; his third —often a violently worded demand—always got him a special shipment of scotch and tobacco; his fourth—a piteous wail—brought the Section Supervisor out for a face-to-face chat and, only then, a few discreet words to the Rowan.

Ackerman was positive she always knew the full story before the Supervisor finally approached her. It pleased her to be difficult, but the one time Ackerman discarded protocol and snarled at her himself, she had mended her ways for a whole quarter. It had reluctantly dawned on Ackerman then that she must like him, and he had used this to advantage since. He had lasted eight years, as against five stationmasters in three months before his appointment.

Each of the twenty-three station staff members had gone through a similar shuffling until the Rowan had accepted them. It took a very delicate balance of mental talent, personality and intelligence to achieve the proper *gestalt* needed to move giant liners and tons of freight. Federal Tel and Tel had only five complete Primes — five T-1's — each strategically placed in a station near the five major and most central stars to effect the best possible transmission of commerce and communications throughout the sprawling Nine-Star League. The lesser staff positions at each Prime Station were filled by personnel who could only teleport, or telepath. It was FT&T's dream to someday provide instantaneous transmission of anything anywhere, anytime. Until that day, FT&T was extremely careful with its five T-1's, putting up with their vagaries like the doting owners of so many golden geese. If keeping the Rowan happy had meant changing the entire lesser personnel twice daily, it would probably have been done. As it

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happened, the present staff had been intact for over two years and only minor soothing had been necessary.

Ackerman hoped that only minor soothing would be needed today. The Rowan had been peevish for a week, and even he was feeling the backlash. So far no one knew why the Rowan was upset.

READY FOR THE LINER, her thought lashed out so piercingly that Ackerman was sure everyone in the ship waiting outside had heard her. But he switched the intercom in to the ship's captain.

"I heard," the captain said wryly. "Give me a five-count and then set us off."

Ackerman didn't bother to relay the message to the Rowan. In her mood, she'd be hearing straight to Capella and back. The generator men were hopping around their switchboards, bringing the booster field up to peak, while she impatiently revved up the launching units to push-off strength. She was well ahead of the standard timing, and the pent-up power seemed to keen through the station. The countdown came fast as the singing power note increased past endurable limits.

ROWAN, NO TRICKS, Ackerman cautioned her.

He caught her mental laugh, and barked a warning to the captain. He hoped the man had heard it, because the Rowan was on zero before he could finish, and the ship was gone beyond radio transmission distance in seconds.

The keen of the dynamos lost only a minute edge of sharpness before they picked up to peak again. The lots on the launchers started snapping out into space as fast as they could be set up. Then loads came rocketing into receiving areas from other Prime Stations, and the ground crews hustled in and out with rerouting and hold orders. The power-note settled to a bearable hum as the Rowan worked out her mood without losing the efficient and accurate thrust that made her FT&T's best Prime.

One of the ground crew signalled a frantic yellow across the board, then red as ten tons of cargo from Earth settled on the Priority Receiving cradle. The waybill said Deneb VIII, which was at the Rowan's limit. But the shipment was marked Rush, Emergency—priority medicine for a virulent plague on the colony planet. And the waybill specified direct transmission.

WELL, WHERE'RE MY COORDINATES AND MY PLACEMENT PHOTO? snapped the Rowan. I CAN'T THRUST BLIND, YOU KNOW, AND WE'VE ALWAYS REROUTED FOR DENEB VIII.

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Bill Powers was flipping through the indexed catalogue, but the Rowan reached out and grabbed the photo.

ZOWIE, DO I HAVE TO LAND ALL THAT MASS THERE MYSELF?

NO, LAZYBONES, I'LL PICK IT UP AT 24.578.82 — THAT NICE LITTLE CONVENIENT BLACK DWARF MIDWAY. YOU WON'T HAVE TO STRAIN A SINGLE CONVOLUTION. The lazy, masculine voice drawled in everyone's mind.

The silence was deafening.

WELL, I'LL BE . . . came from the Rowan.

YOU'VE GOT NO CHOICE, SWEETHEART—JUST PUSH THAT NICE LITTLE PACKAGE OUT MY WAY. OR IS IT TOO MUCH FOR YOU? the lazy voice drawled back.

YOU'LL GET YOUR PACKAGE! snapped the Rowan and the dynamos keened just once piercingly as the ten tons disappeared out of the cradle.

WHY, YOU LITTLE MINX . . . SLOW IT DOWN OR I'LL BURN YOUR EARS OFF!

COME OUT AND CATCH IT! the Rowan laughed, but her laughter broke off with a gasp of surprise and even Ackerman could feel her slamming up her shields.

I WANT THAT STUFF IN ONE PIECE, NOT SMEARED A MILLIMETER THIN ON THE SURFACE, DEARIE, the voice replied sternly. OKAY, I'VE GOT IT. THANKS. WE NEED THIS.

HEY, WHO THE BLAZES ARE YOU? WHAT'S YOUR PLACEMENT?

DENEB SENDER, DEAR GIRL, AND A BUSY LITTLE BOY. TA TA.

The silence was broken only by the whine of the dynamos dying to an idle hum.

Not a hint of what the Rowan was thinking came through, but Ackerman could pick up the aura of incredulity, shock, speculation and satisfaction that pervaded the thoughts of everyone else in the station. The Rowan had met her match. No one except a T-1 could have projected that far. There'd been no mention of another T-1 at FT&T and, as far as Ackerman knew, FT&T's five T-1's were the only ones known. Still, Deneb was now in its third generation, and colonial peculiarities had produced the Rowan in two.

"Hey, fellows," Ackerman cautioned the crew, "sock 'em up. She's not going to like your drift." Shields went up dutifully but the grins did not fade, and Powers even started to whistle.

Another yellow flag came up from a ground man at the Altair hurdle, and the waybill designated live shipment to Betelgeuse. The dynamos whined noisily and then the launcher was empty. Whatever might be going through her mind at the moment, the Rowan was still doing her work.

It was an odd day all told, and Ackerman didn't know whether

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to be thankful or not. He had no precedents to go on and the Rowan wasn't leaking any clues. She spun the day's lot in and out with careless ease. By the time Jupiter's big bulk had moved around to blanket out-System traffic, Callisto's day was over, and she still wasn't off-power as much as decibel one. The in-Sun traffic was finished with, Ackerman signed off for the day, and the computer banks and dynamos were slapped off . . . but the Rowan did not come down.

Ray Loftus, came over to sit on the edge of Ackerman's desk. They took out smokes.

"I was going to ask her Highness to give me a lift home," Loftus said. "But I dunno, now. Got a date with—" He disappeared. A moment later, Ackerman could see him by a personnel carrier. Not only had he been set gently down but various small necessities, among them a shaving kit, floated out of nowhere to a neat pile in the carrier. Ray even had time to settle himself before the hatch sealed and he was whisked off.

Powers came over. "She's sure in a funny mood," he said. When the Rowan got peevish, few of the men at the station asked her to transport them to Earth. She was psychologically committed to staying planetbound, and resented the fact that lesser talents had the ability to be moved about through space without traumatic shock.

ANYONE ELSE?

Adler and Toglia spoke up, and promptly disappeared together.

Ackerman and Powers exchanged looks they hastily suppressed as the Rowan appeared before them smiling. It was the first time that particular expression had crossed her face in two weeks, and it was a welcome and totally unexpected relief to Ackerman.

She smiled, but she said nothing. She took a drag of Ackerman's cigarette and handed it back with a thank you.

The Rowan, for all her temperament, acted with propriety face-to-face. She had grown up with her skill, carefully taught by the old and original T-1, Siglen, the Altairan. She'd had it drilled into her that it might alienate the less gifted to be manhandled by her talent. She might cut corners by "reaching" things during business hours, but she refrained at other times.

"The big boys mention our Denebian friend before, ever?" she asked too casually.

Ackerman shook his head. "Those planets are three generations colonized, though. You came out from Altair in two."

"That could explain it. But there isn't even an FT&T station there."

"Not even a proposed one?"

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Powers asked in astonishment.

"Too far off the beaten track." She shook her head. "I checked it. All Center knows is they received an urgent call about a virus, giving a rundown on the syndrome and symptoms. Lab came up with a serum, batched it, and packed it. They were assured there was someone capable of picking it up and taking it the rest of the way past 24.578.82 if a Prime could get it there. And that's all anybody knows. After all, Deneb VIII isn't very big, yet."

OH, WE'RE BIG ENOUGH, SWEETHEART, drawled the voice again. SORRY TO GET YOU AFTER HOURS, OLD THING, BUT I CAN'T SEEM TO GET IN TO TERRA AND I HEARD YOU COLORING THE ATMOSPHERE.

WHAT'S WRONG? the Rowan shot back. DID YOU SMEAR YOUR SERUM AFTER ALL THAT BIG TALK?

SMEAR IT HELL, I'VE BEEN DRINKING IT. WE'VE GOT SOME ET VISITORS. THEY THINK THEY'RE EXTERMINATORS. LEASTWISE, WE'VE GOT THIRTY UFO HERE, PERCHED FOUR THOUSAND MILES UP. THAT BATCH OF SERUM YOU WAFTED OUT TO ME THIS MORNING WAS AN ANTIBIOTIC FOR THE SIXTH VIRUS WE'VE BEEN SOCKED WITH IN THE LAST TWO WEEKS. SOON AS OUR BOYS WHIP UP SOMETHING TO KNOCK OUT ONE, ANOTHER ONE TAKES ITS PLACE. IT'S ALWAYS WORSE THAN THE ONE BEFORE. WE'VE LOST 25% OF OUR POPULATION ALREADY, AND THIS LAST ONE WAS A BEAUT. I WANT TWO TOP GERMDOGS OUT HERE ON THE DOUBLE, AND ABOUT THREE PATROL SQUADRONS. WE'RE FLAT ON OUR BACKS NOW, AND OUR FRIENDS WON'T SETTLE FOR JUST HOVERING AROUND AND DOUSING US WITH NASTY BUGS MUCH LONGER. THEY'RE GOING TO START BLOWING HOLES IN US ANY MINUTE NOW. SO SORT OF PUSH THE WORD ALONG TO EARTH, WILL YOU, OLD THING?

I'LL RELAY, NATURALLY. DON'T YOU HAVE A PRIORITY CALL SIGNAL ASSIGNED TO YOU?

WHY SHOULD I? I'M NOT FT&T.

YOU WILL BE SOON, IF I KNOW MY BOSSES.

YOU MAY KNOW YOUR BOSSES, COOKIE, BUT YOU DON'T KNOW ME.

THAT CAN ALWAYS BE ARRANGED.

THIS IS NO TIME FOR FLIRTING. GET THAT MESSAGE THROUGH FOR ME LIKE A GOOD GIRL.

WHICH MESSAGE?

THE ONE I JUST GAVE YOU.

THAT OLD ONE? THEY SAY YOU CAN HAVE TWO GERMDOGS IN THE MORNING, AS SOON AS WE CLEAR JUPITER. BUT EARTH SAYS NO SQUADRONS. HAVE TO WAIT FOR ARMED ATTACK.

YOU CAN DOUBLE-TALK TOO, HUH? YOU'RE TALENTED. BUT THE MORNING DOES US NO GOOD. NOW IS WHEN WE NEED THEM. CAN'T YOU SLING THEM . . . NO, THEY MIGHT LEAVE A FEW IMPORTANT ATOMS OR SOMETHING IN JUPITER'S MASS. BUT I'VE GOT TO HAVE SOME PRETTY POTENT HELP. AND IF SIX VIRUSES

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DON'T CONSTITUTE ARMED ATTACK, I'M AT A LOSS FOR A DEFINITION OF WHAT WE'RE UNDER.

MISSILES CONSTITUTE ARMED ATTACK, recited the Rowan primly.

I'LL NOTIFY MY FRIENDS UP THERE. MISSILES WOULD BE PREFERABLE—THEM I CAN SEE. I NEED THOSE GERMDOGS *now*. CAN'T YOU TURN YOUR SWEET LITTLE MIND TO A SOLUTION?

AS YOU MENTIONED, IT'S AFTER HOURS.

BY THE HORSEHEAD, WOMAN! The drawl was replaced by a cutting roar. THIS IS DOUBLE CRASH PRIORITY!

LOOK, AFTER HOURS HERE MEANS WE'RE BEHIND JUPITER . . . BUT . . . WAIT . . . HOW DEEP IS YOUR RANGE?

I HONESTLY DON'T KNOW. And doubt crept into the bodiless voice in their minds.

"Ackerman," snapped the Rowan.

"I've been listening."

HANG ON, DENEB. I'VE GOT AN IDEA. I BELIEVE I CAN GET YOU YOUR GERMDOGS. OPEN TO ME IN HALF AN HOUR.

The Rowan whirled on Ackerman. "I want my shell." Her brilliant eyes were flashing and her face was alight. "Afra!"

The station's T-4, a yellow-eyed, handsome Capellan, raised his head from where he had been watching her quietly. Except for the Rowan herself, Afra was the staff's most talented member.

"Yes, Rowan."

The Rowan's brilliant eyes were flashing, her face alight as she charged into the problem. She frowned faintly as she realized the station men were grinning at her. But the dynamos were warming up, and her special shell was waiting on its launching rack. The miraculous smile that always shocked Ackerman with its hint of passion lit her sharp face as she looked over each of her team men.

"Launch me slow over Jupiter's curve, Afra. Then I'll want to draw heavy. Nice and real slow, friend," she cautioned. Like all Primes, she simply didn't have the fortitude to launch herself through space. Her one trip from Altair to Callisto had almost driven her mad. Only severe self-discipline had conditioned her even to riding a shell a short way off Callisto.

She gathered herself and disappeared to the launcher. In the shell, she settled daintily into the shock couch. The moment the lock whistle shut off she could feel the ship launching gently, gently away from Callisto. Only when the ship had swung into position over Jupiter's great curve did she answer the priority call coming in from Earth Central.

NOW WHAT THE BILLY BLAZES ARE YOU DOING, ROWAN? Reidinger, the FT&T Central Prime, cracked his voice across the void. HAVE

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YOU LOST WHAT'S LEFT OF YOUR PRECIOUS MIND?

SHE'S DOING ME A FAVOR, Deneb said crisply, joining them.

WHO'N HELL'RE YOU? snapped Reidinger. Then, in shocked surprise: DENEB! HOW'D YOU GET OUT THERE?

WISHFUL THINKING. HEY, PUSH ME OUT THOSE GERMDOGS TO MY PRETTY FRIEND HERE, HUH?

NOW, WAIT A MINUTE! YOU'RE GOING A LITTLE TOO FAR, DENEB. YOU CAN'T BURN OUT MY BEST GIRL WITH AN UNBASED SEND LIKE THAT.

OH, I'LL PICK IT UP MIDWAY, LIKE THOSE ANTIBIOTICS THIS MORNING.

DENEB, WHAT'S THIS BUSINESS WITH ANTIBIOTICS AND GERMDOGS? WHAT'RE YOU COOKING UP OUT THERE IN THAT HEATHENISH HOLE?

OH, WE'RE FIGHTING A FEW PLAGUES WITH ONE HAND AND KEEPING THIRTY BOGEY ET'S UPSTAIRS. He gave them a look with his vision at an enormous hospital, with a continuous stream of airborne ambulances coming in; at crowded wards, grim-faced nurses and doctors, and uncomfortably high piles of sheeted, still figures.

WELL, I'M NOT SURPRISED YOU NEED HELP. ALL RIGHT. YOU CAN HAVE ANYTHING YOU WANT—WITHIN REASON. BUT I WANT A FULL REPORT.

WHAT ABOUT THOSE PATROL SQUADRONS.

NO! ABSOLUTELY NO PATROL SQUADRONS. IT DOESN'T LOOK TO ME LIKE THOSE ET'S ARE GOING TO COME DOWN. THEY WERE HOPING FOR A SOFT TOUCH. YOU'RE SHOWING 'EM DIFFERENT. THEY'LL GIVE UP AND GET OUT, NOW.

WISH YOU WERE HERE WITH ME TO WAVE 'EM BYE-BYE, Deneb said.

Reidinger ignored him. GERMDOGS'RE SEALED, ROWAN. PICK 'EM UP AND THROW 'EM OUT, he said, and signed off.

ROWAN—THAT'S A PRETTY NAME, mused Deneb.

I'M WORKING, BOY, she said absently. She had followed along Reidinger's initial push, and picked up the two personnel carriers as they materialized beside her shell. She pressed into the station dynamos and gathered up strength. The generators whined, and she pushed out. The carriers disappeared.

THEY'RE COMING IN, ROWAN. THANKS A LOT.

A passionate and tender kiss was blown to her across eighteen light years of space. She tried to follow after the carriers and pick up his touch again, but he was no longer receiving.

She sank back in her couch. Deneb's sudden appearance had disconcerted her. All of the Primes were isolated by their high talents, but the Rowan was more alone than any of them.

Siglen, the Altairan Prime who had discovered her as a mere child and carefully nursed her talent into its tremendous poten-

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tial, was the oldest Prime of all. The Rowan, a scant twenty-three now, had never gotten anything from Siglen to comfort her except old-maidish platitudes. Betelgeuse Prime David was madly in love with his T-2 wife and occupied with raising a brood of high-potential brats. Although Reidinger was always open to the Rowan, he also had to keep open every minute to all the vast problems of the FT&T system. Capella was also open, but so mixed up herself that her touch only distressed the Rowan to the point of madness.

Reidinger had tried to ease her devastating loneliness by sending up T-3's and T-4's like Afra, but she had never taken to any of them. The only male T-2 ever discovered in the Nine-Star League had been a confirmed homosexual. Ackerman was a nice, barely talented guy devoted to his wife. And now, on Deneb, a T-1 had appeared, out of nowhere—and so very, very far away.

AFRA, TAKE ME HOME NOW, she said tiredly.

Afra brought the shell down with infinite care.

She lay for a while on her couch in the shell after the others had left. In her unsleeping consciousness, she was aware that the station was closing down, that Ackerman and the others had left for home until Callisto once more came out from behind Jupiter's titan bulk. Everybody had some place to go, except the Rowan, who made it all possible. The screaming, bitter loneliness that overcame her during her off hours welled up—the frustration of being locked up out here, unable even to steel herself to going off ground past Afra's sharply limited range—alone, alone with her two-edged talent. Murky green and black swamped her mind until she remembered the blown kiss. Suddenly, completely, she fell into the first restful sleep of two weeks.

ROWAN. It was Deneb's touch that roused her. ROWAN, PLEASE WAKE UP FROM THAT SLEEP, ROWAN.

HMMM? she murmured sleepily.

OUR GUESTS ARE GETTING ROUGHER . . . SINCE THE GERMDOGS . . . WHIPPED UP A BROAD-SPECTRUM ANTIBIOTIC . . . THAT PHASE . . . OF THEIR ATTACK . . . FAILED . . . SO NOW THEY'RE . . . POUNDING US . . . WITH MISSILES . . . GIVE MY REGARDS . . . TO YOUR SPACE-LAWYER FRIEND . . . REIDINGER.

AND YOU'RE PLAYING PITCH WITH THEM? The Rowan came awake hurriedly. She could feel Deneb's contact cutting in and out as he interrupted himself to catch incoming missiles and fling them back.

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ONLY THING . . . TO DO.

THEN YOU'D BETTER TAKE SOME EVASIVE ACTION. IF THEY HAVE ANY TALENT AMONG THEM, THEY'LL SPOT YOU.

CAN'T BE HELPED . . . NO TIME TO . . . MOVE AROUND . . . I'M A POGO-STICK . . . SWEETHEART . . . IS WHY I . . . NEED YOU HERE . . . AND . . . ANY . . . TWIN . . . SISTERS . . . YOU HAPPEN . . . TO HAVE HANDY.

THERE! BUT I CAN'T GO THERE!

WHY NOT?

I CAN'T—I CAN'T, moaned the Rowan, twisting against the web of the couch.

BUT I'VE . . . GOT . . . TO . . . HAVE . . . HELP, he said and faded away.

REIDINGER! the Rowan screamed.

ROWAN, I DON'T CARE IF YOU ARE A T-1. THERE ARE CERTAIN LIMITS TO MY PATIENCE AND YOU'VE STRETCHED EVERY BLASTED ONE OF THEM, YOU LITTLE WHITE-HAIRED APE!

His answer scorched at her. She blocked automatically, but clung to his touch. SOMEONE HAS GOT TO HELP DENEB! she cried, transmitting his message.

WHAT? HE'S JOKING.

HOW COULD HE, ABOUT A THING LIKE THAT?

DID YOU SEE THE MISSILES? DID HE SHOW YOU WHAT HE WAS ACTUALLY DOING?

WELL, NO, BUT I FELT HIM THRUSTING. AND SINCE WHEN DOES ONE OF US DISTRUST ANOTHER ONE WHEN HE ASKS FOR HELP—EVEN IF DENEB HASN'T EVER BEEN IN CONTACT WITH US BEFORE.

SINCE WHEN? Reidinger snapped. SINCE EVE HANDED ADAM A ROSY ROUND FRUIT AND SAID EAT. AND EXACTLY SINCE DENEB'S NEVER BEEN INTEGRATED INTO THE PRIME NETWORK AND NONE OF US CAN BE SURE WHO OR WHAT HE IS—OR EVEN EXACTLY WHERE HE IS. I DON'T LIKE THIS TAKING EVERYTHING AT HIS WORD. TRY AND GET HIM BACK FOR ME.

I CAN'T REACH HIM. HE'S TOO BUSY REPELLING MISSILES.

THAT'S A HOT ONE! LOOK, HE CAN TAP ANY OTHER POTENTIALS ON HIS OWN PLANET. THAT'S ALL HE NEEDS.

BUT . . .

BUT ME NO BUTS AND LEAVE ME ALONE. I'VE GOT A COMPANY—A LEAGUE—TO HOLD TOGETHER. Reidinger signed off with a blacklash that stung. The Rowan lay in her couch, bewildered at Reidinger's attitude. He was always busy, always gruff. But he had never been this stupidly unreasonable. While out there, Deneb was growing weaker . . .

The station was operating again—that is, Callisto was clear of Jupiter, and the incoming cargoes were piling up at the launchers. But there was no outgoing traffic. Tension and worry hung over the station personnel.

"There must be something we can do for him . . . something,"

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the Rowan said, choked with tears.

Afra looked at her sadly and compassionately. He patted her frail shoulder. "Nobody can help him. Not even you can reach all the way out to him. If he can't get enough help on his own planet, he's lost. Only some other Primes, right there on the spot with him, could help. And none of you can. You're all tied to your little worlds by your umbilical cords of space-fear. And it would take a normally powered ship eighteen years to reach him from here."

"I know—I know!" the Rowan wailed.

KEE-RIST! THE RADAR WARNING! It was Ackerman's shout in their minds. The Rowan linked her mind to his as he plunged toward the little-used radar screen. As she probed into space she found the intruder, a highly powered projectile arrowing in from behind Uranus. Guiltily, she flushed, for she ought to have detected it 'way beyond radar range.

IT'S A MISSILE! she cried out incredulously.

There was no time to run up the idle dynamos. The missile was coming in too fast.

I WANT A WIDE-OPEN MIND FROM EVERYONE ON THIS MOON! the Rowan broadcast loudly. She felt the surge of power as forty-eight talents on Callisto, including Ackerman's ten-year-old son, lowered their shields. She picked up their power—from the least 12 to Afra's sturdy 4—sent her touch racing out beyond Jupiter and picked up the alien bomb. She had to wrestle for a moment with the totally unfamiliar molecular arrangement of its substance. Then, with her augmented energy, it was easy enough to swerve the projectile down into Jupiter's seething mass. She deactivated the trigger and then scattered the fissionables from the warhead into the planet's deep crevasses.

She released the others who had joined her and fell back again on the couch.

"How in hell did that thing ever find us?" Afra asked from the chair where he had slumped.

She shook her head wearily. Without the dynamos, there was no surge of power to act as the initial carrier wave for her touch. Even with the help of the others —and all of them put together didn't add up to one-tenth of another Prime—it was hard launching her power. She thought of Deneb—alone—without an FT&T station to help him—doing it again, and again, and again—and her heart twisted.

WARM UP THE DYNAMOS, BRIAN —THERE'LL BE MORE OF THEM IN.

Afra looked up, startled.

PRIME ROWAN OF CALLISTO STATION ALERTING EARTH PRIME REIDINGER AND ALL OTHER PRIMES! PREPARE FOR POSSIBLE ATTACK BY

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FISSIONABLE PROJECTILES OF ALIEN ORIGIN. ALERT ALL RADAR WATCH STATIONS AND PATROL FORCES.

She lost her official calm and added hysterically: WE'VE GOT TO HELP DENEB NOW—WE'VE GOT TO! IT'S NO LONGER AN ISOLATED ATTACK ON AN OUTLYING COLONY. IT'S A CONCERTED ATTACK ON OUR HEART WORLD. IT'S AN ATTACK ON EVERY PRIME IN THE NINE-STAR LEAGUE!

ROWAN! Reidinger exploded, but before he could say any more, the Rowan opened her mind to him and showed him the five new projectiles driving on Callisto. FOR THE LOVE OF LITTLE APPLES! he exclaimed incredulously. WHAT HAS OUR LITTLE MAN BEEN STIRRING UP?

SHALL WE FIND OUT? Rowan asked with deadly sweetness.

Reidinger transmitted impatience, fury, misery, and then shock as he gathered her intention.

YOUR PLAN WON'T WORK. IT'S IMPOSSIBLE! WE CAN'T MERGE MINDS TO FIGHT THIS THING. ALL OF US ARE TOO EGOCENTRIC—TOO UNSTABLE. WE'D BURN OUT, FIGHTING EACH OTHER. FT&T WOULD COLLAPSE!

YOU, ME, ALTAIR, BETELGEUSE AND CAPELLA—WE CAN DO IT. IF I CAN DEACTIVATE ONE OF THOSE HELL MISSILES WITH ONLY FORTY-EIGHT MINOR TALENTS AND NO POWER FOR HELP, FIVE PRIMES PLUS FULL POWER OUGHT TO BE ABLE TO TURN THE TRICK. WE CAN KNOCK THE MISSILES OFF. AND WE CAN MERGE WITH DENEB TO HELP HIM. THAT'LL MAKE SIX OF US. SHOW ME THE ET WHO COULD STAND UP TO IT.

LOOK, GIRL, Reidinger pleaded, WE DON'T EVEN KNOW HIM! WE CAN'T JUST MERGE — HE COULD THROW US APART, OR WE COULD BURN HIM UP WITH OUR POWER. WE DON'T KNOW HIM! WE CAN'T GAUGE HIS STRENGTH.

YOU'D BETTER CATCH THAT MISSILE COMING AT YOU, she said calmly. I CAN'T HANDLE MORE THAN TEN AT A TIME AND KEEP UP A SENSIBLE CONVERSATION.

She felt Reidinger weakening. She went on: IF DENEB'S BEEN HANDLING A PLANET-WIDE BARRAGE, THAT'S A PRETTY GOOD INDICATION OF HIS STRENGTH. I'LL HANDLE THE EGO-MERGE BECAUSE I DAMNED WELL WANT TO. BESIDES, THERE ISN'T ANY OTHER COURSE OPEN TO US, IS THERE?

Their conversation was taking the briefest possible time, and yet more missiles were coming in. It was too late for the Patrol. And now all the Prime stations were under bombardment.

ALL RIGHT, Reidinger said.

"NO, NO, NO, NO! YOU'LL BURN HER OUT—BURN HER OUT, POOR THING! old Siglen babbled from Altair. LET US STICK TO OUR LAST —WE CAN DO THIS ALONE—ALONE AND SAFE—WE DARE NOT EXPOSE OURSELVES—NO, NO, NO!

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SHUT UP, IRONPANTS, David said.

SHOULDER TO THE WHEEL, YOU OLD WART! Capella chimed in waspishly.

LOOK, ROWAN, Reidinger interjected suddenly. SIGLEN'S RIGHT. WE'RE GOING TO HAVE TO FOCUS THROUGH YOU TO REACH DENEB. YOU'RE THE ONLY ONE WHO KNOWS HIS TOUCH.

I KNOW THAT—I ALREADY SAID SO. I'LL TAKE MY CHANCES.

DAMN DENEB FOR STARTING ALL THIS! Reidinger muttered.

I'VE GOT TO DO IT was all the Rowan said.

Then the unleashed power of the other FT&T Primes, plus all the mechanical surge of the station generators, shot through her. She grew, grew, and only dimly saw the bombarding ET missiles wiped out like so many mayflies. She grew, grew until she felt like a colossus, larger than ominous Jupiter. Slowly, carefully, tentatively, because the massive power was braked only by her own slender conscious control, she reached out toward Deneb.

She spun on, in grandeur, astounded by the limitless force she had become. She passed the small black dwarf that was the midway point. Then she felt the mind she searched for; a tired mind, its periphery wincing, ready to cringe with weariness.

OH, DENEB, DENEB, YOU'RE STILL THERE! she cried out in relief and happiness, so grateful to find him still fighting his desperate battle that they had merged before her ego was even aware of what she was doing. She abandoned her most guarded self to him and, with that surrender, the massed power she held flowed into him. The tired mind of the man grew, healed, strengthened and blossomed until she was only a small part of it, lost in the greater part of this immense mental whole. Suddenly she saw with his eyes, heard with his ears and felt with his touch, aware of the titanic struggle.

The greenish sky above was pitted with mushroom puffs, and even the raw young hills around him were scarred with deflected missiles. Easily now, he was turning aside the rockets aimed at him.

LET'S GO UP THERE AND FIND OUT WHAT THEY ARE, Reidinger said. Now.

Deneb took them up to the thirty mile-long ships. The massed minds took indelible note of intruders. Then, off-handedly, Deneb broke the hulls of twenty-nine of the ET ships, spilling their contents into space. To the occupants of the survivor, he gave a searing impression of the Primes and the indestructability of the worlds in this section of space. With one great heave, he threw the lone ship away from

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his exhausted planet, sent it hurtling farther than it had come, into uncharted black immensity.

THANK YOU FOR HELPING, he said to all the Primes. I HOPED YOU WOULD.

Then the Rowan felt the links dissolving. Deneb caught her fast to him and held her until the others had all retreated. When they were alone, he opened all his thoughts to her, so that now she knew him as intimately as he knew her.

DON'T GO YET, SWEET ROWAN. LOOK AROUND YOU. IT'LL TAKE A WHILE FOR MY HOME TO BE BEAUTIFUL AGAIN, BUT IT'LL BE LOVELIER THAN EVER. COME LIVE WITH ME, MY LOVE.

The Rowan's wracked cry of protest made him wince.

I CAN'T—I CAN'T! she cried, cringing against her own outburst and closing off her inner heart so he couldn't see the pitiful why. She retreated, in the moment of his confusion, back to her own frail body. She beat her fists hopelessly against her thighs.

ROWAN! came his cry. ROWAN, I LOVE YOU!

She closed even the outer fringe of her perception, and curled forward in her chair. Afra, who had watched patiently over her while her mind was far away, touched her shoulder.

OH, AFRA; AFRA! she moaned. IT MAY BE TRUE THAT DENEB AND I COULD LOVE EACH OTHER PERFECTLY, TOUCHING EACH OTHER'S WHOLE MINDS, KNOWING EACH OTHER COMPLETELY. BUT I'LL NEVER, NEVER BE ABLE TO HOLD HIM IN MY ARMS — NEVER KISS HIM— OH, DENEB, I LOVED YOU SO!

And the Rowan forced her bruised self into sleep. Afra picked her up gently and carried her to a bed in a room off the station's main level. He shut the door after he had put her down and tip-toed away, and sat down on watch in the corridor outside, his handsome face dark and inscrutable.

Afra and Ackerman reached the only possible decision. Rowan had burned herself out. They'd have to tell Reidinger. It was forty-eight hours since they'd had a single contact with her mind. She had ignored, or not heard, their tentative requests for help. Afra, Ackerman and the machines could handle some of the routine freighting, but two liners were due in and that required her. They knew she was still alive, but that was all. At first, Ackerman had assumed she was only resting. Only Afra knew better, and for forty-eight hours he'd hoped desperately that she would wake again.

"I'll run up the dynamos and we'll tell Reidinger," said Ackerman with a reluctant sigh.

WELL—WHERE'S ROWAN? Reidinger demanded. A moment's

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touch with Afra told him. He sighed. WE'LL JUST HAVE TO ROUSE HER, SOME WAY. BUT SHE ISN'T BURNED OUT. WE CAN BE GRATEFUL FOR THAT.

YOU OUGHT TO BE, Ackerman said bitterly. IF YOU'D PAID ANY ATTENTION TO HER IN THE FIRST PLACE—

YES, I'M SURE, Reidinger cut him off brusquely. IF I'D GOTTEN HER LIGHT OF LOVE HIS PATROL SQUADRONS WHEN SHE WANTED ME TO, SHE WOULDN'T EVEN HAVE BEEN ABLE TO MERGE WITH HIM MENTALLY. I PUT AS MUCH PRESSURE ON HER AS I DARED; BUT WHEN THAT COCKY YOUNG ROOSTER ON DENEB STARTED LOBBING DEFLECTED ET MISSILES AT US TO GET US TO DO SOMETHING, I HAD TO GIVE IN. SO I MANAGED TO GET THE ROWAN TO LEARN TO CRAWL. He sighed. I WAS HOPING I COULD GET AT LEAST ONE PRIME WHO COULD FLY.

WHA—AT! YOU MEAN THE BATTLE WASN'T REAL?

A LITTLE TOO REAL. ANOTHER FEW HOURS OF FENDING THOSE MISSILES AWAY FROM HIS PLANET, AND DENEB WOULD HAVE BEEN COMPLETELY EXHAUSTED. THE ET'S WOULD HAVE WON. SO HE SPARED A LITTLE STRENGTH—FROM SOMEWHERE—AND GOT US MOVING.

BUT YOU LET THINGS GO THAT FAR.

I SENT THE GERMDOGS. THAT STOPPED ANYONE'S DYING, AT LEAST UNTIL DENEB'S MISSILE DEFENSE BROKE DOWN. LOOK—I WAS TRYING TO GET THE ROWAN TO BREAK DOWN THIS FEAR PSYCHOSIS WE ALL HAVE. I WAS TRYING TO GET HER TO GO TO HIM PHYSICALLY. SHE'S THE YOUNGEST ONE OF US ALL, AND THE STRONGEST, EXCEPT FOR DENEB. I WAS HOPING— BUT, I FAILED. Reidinger sounded resigned. I'M GETTING OLD. OLD AND DECREPIT. I'M TRYING DESPERATELY TO GET SOME NEW PRIMES — I DON'T KNOW WHERE FROM.

I'D HOPED THAT SHE AND DENEB—

I WOULDN'T COUNT ON THAT NOW, Afra said.

NO. NOT IF SHE'S GIVEN HIM UP FOREVER . . .

They cut off abruptly as the door opened to admit the Rowan —a wan, pale, very quiet Rowan.

She smiled apologetically. "I've been asleep a long time."

"You were mighty tired," Ackerman said.

She winced a little and then smiled at Ackerman's instant concern. "I still am, a little." She frowned. "Didn't I hear you two talking to Reidinger, just now?"

"We got a little worried you'd never wake up," Ackerman admitted. "There're two liners coming in, and Afra and I just plain can't handle human cargo."

The Rowan smiled ruefully. "I'll do my best." She walked slowly up the stairs to her tower.

Ray Loftus murmured sadly, watching her: "She sure has changed."

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Her chastened attitude wasn't the relief her staff had once considered it would be. The work that day went on with monotonous efficiency, with none of the by-play and freakish temperament that had previously kept them on their toes. The men moved around automatically, saddened by this gently tragic Rowan. That might have been one reason why, toward the very end of the day, no one particularly noticed the young man come in. It was only when Ackerman got up from his desk for more coffee that he noticed him sitting there quietly.

"You new?"

"Well, yes. I was told to see Miss Rowan. Mr. Reidinger signed me on in his office late this morning." He spoke pleasantly, stood up, and then he smiled. Fleetingly, Ackerman was reminded of the miracle of the Rowan's sudden smiles which hinted at some secret of beauties. This man's smile was full of uninhibited vigor. The entire tanned face echoed the warmth of his expression. The brilliant blue eyes danced with good humor and friendliness.

Ackerman found himself grinning back like a fool and shaking the man's hand stoutly.

"Mighty glad to know you. What's your name?"

"Jeff Raven. I just got in from . . ."

"Hey, Afra, want you to meet Jeff Raven. Here, have a cup of coffee. A little raw on the walk up from the freighting station this morning, isn't it? Been on other Prime Stations?"

"Well, as a matter of fact . . ."

Toglia and Loftus had looked around from their computers toward the recipient of such unusual cordiality. They found themselves grinning as broadly and rushing up to welcome this magnetic stranger. Raven accepted the coffee graciously from Ackerman, who instantly proferred cigarettes. He had the feeling he must give this wonderful guy something else, it had been such a pleasure to serve him coffee.

Afra looked quietly at the stranger, his calm yellow eyes a little clouded. "Hello," he murmured ruefully.

Jeff Raven's cheeks flushed a little. "Hello," he said gently.

Before anyone in the station quite realized what was happening, everyone had left his post and gathered around Raven, chattering and grinning, using the simplest excuse to touch his hand or shoulder. He was genuinely interested in everything said, and although there were twenty-three people anxious to monopolize his attention, no one felt slighted. His attention seemed to envelope them all.

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DOWN THERE? demanded the Rowan with an echo of her familiar irritation. WHY . . .

Contrary to all her previously sacred rules, she appeared suddenly in the middle of the room, looking wildly around her. Raven touched her hand gently.

"Reidinger said you needed me," he said.

"Deneb?" she whispered. "*Deneb*? But—but you're *here*—you're *here*!"

He smiled tenderly and drew his hand across her shining hair.

The Rowan's jaw dropped and then she burst out laughing, the laughter of a supremely happy, carefree girl. Her laughter broke off into a gasp of pure terror.

HOW DID YOU GET HERE?

JUST CAME. YOU CAN TOO, YOU KNOW.

NO, NO—I CAN'T. NO T-1 CAN. Rowan tried to free herself from him as if he were suddenly repulsive.

I DID, THOUGH, he reminded her gently. IT'S ONLY A QUESTION OF REARRANGING ATOMS. WHY SHOULD IT MATTER WHOSE THEY ARE?

OH, NO—NO—

"Did you know," Raven said conversationally, speaking for everyone's benefit, "that Siglen gets sick just going up and down stairs. Lives all on one floor and has furniture with short legs, doesn't she, Rowan?"

"Yes . . ."

"Ever stop to wonder what that might mean? I did a little digging. Siglen's middle ear reacts very badly to free fall. She was so miserably sick the first time she tried moving herself anywhere, she went into a trauma about it. Of course, it never occurred to her to find out *why*. So she went a little crazy on the subject; and *who* trained all the other Primes?"

"Siglen . . . Oh, Deneb, you mean . . . ?"

Raven grinned. "Yup. Passed it on to every one of you, of course. The Curse of Talent. The Great Fear. The Great Bushwah! It might have gone on forever—except Siglen never trained *me*." He laughed with wicked boyishness and opened his mind to the Rowan. Warmth and reassurance passed between them. Her careful conditioning withered in that warmth. Her eyes shone.

COME LIVE WITH ME NOW, MY ROWAN. REIDINGER SAYS YOU CAN COMMUTE FROM HERE TO DENEB EVERY DAY.

"Commute?" She said it aloud, conscious of the valuable parts of Siglen's training, reserving only their most private thoughts for the super-high channels of Prime communication.

"Certainly," he said, sharing her impulse. "You're still a working T-1 under contract to FT&T. And so, my love, am I."

"I guess I do know my bosses, don't I?" she giggled.

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"Well, the price was right. Reidinger didn't haggle for a second after I walked into his private office at eleven this morning."

"Commuting to Callisto," the Rowan repeated dazedly.

"All finished here for the day?" Raven asked Ackerman, who shook his head after a glance at the launching racks.

"C'mon, gal. Take me to your ivory tower and we'll finish this up in a jiffy and then go home. I've got some patching up to do on some pretty mountains the ET's knocked down. You can help me with it." AND WHEN WE'VE FINISHED THAT . . .

Raven smiled wickedly at the Rowan and pressed her hand to his lips in the age-old gesture of courtliness. The Rowan's smile answered his with blinding joy.

Afra took the burning forgotten cigarette from between Ackerman's fingers and dragged on it. Afra was a colonial, his subtle drift away from Terrestrial human stock reflected in minute differences, such as his yellow eyes and his very faintly greenish skin. No one could understand why he smoked—tobacco made his eyes water badly, and brought out the greenish tint in his skin—but he always joined the rest of the staff in one cigarette at quitting time. His eyes were wet now, as the Rowan and her lover climbed the stairs to the tower.

Through Time And Space With Ferdinand Feghoot: XIII

It was Ferdinand Feghoot who, in 3312, first proved that fish were highly intelligent and that men could converse with them. He was accorded the honor of signing the ensuing Treaty of Peace, Amity, Commerce, and Navigation—which was also endorsed by an imposing elderly shark.

"I spent seventeen months eavesdropping on fish conversations and analyzing their language," he told reporters after the ceremony. "Then I slipped overboard with my skin-diving gear, and asked for their leader. They took me to the Generalissimo here, and I'll never forget my first sight of him, completely at ease in the lovely blue water, with that busy little fish hovering right by his head all the time. He received me most courteously in spite of my abominable accent. Why, he was so polite and so tactful that it was almost a week before I realized that he is as deaf as a post."

"But—how could he understand you?" asked the reporters.

"That's simple," said Ferdinand Feghoot. "The little fish is his herring aide."

—GRENDEL BRIARTON

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F&SF's Contributing Science Editor tells a warm tale of youth and old age, of Madison Ave. and green grass, and of the power in a name.

UNTO THE FOURTH GENERATION

by Isaac Asimov

AT TEN OF NOON, SAM MARTEN hitched his way out of the taxicab, trying as usual to open the door with one hand, hold his briefcase in another and reach for his wallet with a third. Having only two hands, he found it a difficult job and, again as usual, he thudded his knee against the cab-door and found himself still groping uselessly for his wallet when his feet touched pavement.

The traffic of Madison Avenue inched past. A red truck slowed its crawl reluctantly, then moved on with a rasp as the light changed. White script on its side informed an unresponsive world that its ownership was that of F. Lewkowitz and Sons, Wholesale Clothiers.

Levkowich, thought Marten with brief inconsequence, and finally fished out his wallet. He cast an eye on the meter as he clamped his briefcase under his arm. Dollar sixty-five, make that twenty cents more as a tip, two singles gone would leave him only one for emergencies, better break a fiver.

"Okay," he said, "take out one-eighty-five, bud."

"Thanks," said the cabbie with mechanical insincerity and made the change.

Marten crammed three singles into his wallet, put it away, lifted his briefcase and breasted the human currents on the sidewalk to reach the glass doors of the building.

Levkovich? he thought sharply, and stopped. A passerby glanced off his elbow.

"Sorry," muttered Marten, and made for the door again.

Levkovich? That wasn't what the sign on the truck had said. The name had read Lewkowitz, Loo-koh-itz. Why did he *think* Levkovich? Even with his college German in the near past changing the w's to v's, where did he get the "-ich" from?

Levkovich? He shrugged the whole matter away roughly. Give

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it a chance and it would haunt him like a Hit Parade tinkle.

Concentrate on business. He was here for a luncheon appointment with this man, Naylor. He was here to turn a contact into an account and begin, at 23, the smooth business rise which, as he planned it, would marry him to Elizabeth in two years and make him a paterfamilias in the suburbs in ten.

He entered the lobby with grim firmness and headed for the banks of elevators, his eye catching at the white-lettered directory as he passed.

It was a silly habit of his to want to catch suite numbers as he passed, without slowing, or (heaven forbid) coming to a full halt. With no break in his progress, he told himself, he could maintain the impression of belonging, of knowing his way around, and that was important to a man whose job involved dealing with other human beings.

Kulin-etts was what he wanted, and the word amused him. A firm specializing in the production of minor kitchen gadgets, striving manfully for a name that was significant, feminine, and coy, all at once—

His eyes snagged at the M's and moved upward as he walked. Mandel, Lusk, Lippert Publishing Company (two full floors), Lafkowitz, Kulin-etts. There it was—1024. Tenth floor. OK.

And then, after all, he came to a dead halt, turned in reluctant fascination, returned to the directory, and stared at it as though he were an out-of-towner.

Lafkowitz?

What kind of spelling was that?

It was clear enough. Lafkowitz, Henry J., 701. With an A. That was no good. That was useless.

Useless? Why useless? He gave his head one violent shake as though to clear it of mist. Damn it, what did he care how it was spelled? He turned away, frowning and angry, and hastened to an elevator door, which closed just before he reached it, leaving him flustered.

Another door opened and he stepped in briskly. He tucked his briefcase under his arm and tried to look bright, alive—junior executive in its finest sense. He had to make an impression on Alex Naylor, with whom so far he had communicated only by telephone. If he was going to brood about Lewkowitzes and Lafkowitzes—

The elevator slid noiselessly to a halt at seven. A youth in shirtsleeves stepped off, balancing what looked like a desk-drawer in which were three containers of coffee and three sandwiches.

Then, just as the doors began closing, frosted glass with black lettering loomed before Marten's eyes. It read: "701—Henry J. Lefkowitz — Importer" and was

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pinched off by the inexorable coming together of the elevator doors.

Marten leaned forward in excitement. It was his impulse to say: Take me back down to 7.

But there were others in the car. And after all, he had no reason.

Yet there was a tingle of excitement within him. The Directory *had* been wrong. It wasn't A, it was E. Some fool of a non-spelling menial with a packet of small letters to go on the board and only one hind foot to do it with.

Lefkowitz. Still not right, though.

Again, he shook his head. Twice. Not right for what?

The elevator stopped at ten and Marten got off.

Alex Naylor of Kulin-etts turned out to be a bluff, middle-aged man with a shock of white hair, a ruddy complexion, and a broad smile. His palms were dry and rough, and he shook hands with a considerable pressure, putting his left hand on Marten's shoulder in an earnest display of friendliness.

He said, "Be with you in two minutes. How about eating right here in the building? Excellent restaurant, and they've got a boy who makes a good martini. That sound all right?"

"Fine. Fine." Marten pumped up enthusiasm from a somehow-clogged reservoir.

It was nearer ten minutes than two, and Marten waited with the usual uneasiness of a man in a strange office. He stared at the upholstery on the chairs and at the little cubby-hole within which a young and bored switchboard operator sat. He gazed at the pictures on the wall and even made a half-hearted attempt to glance through a trade journal on the table next to him.

What he did not do was think of Lev—

He did *not* think of it.

The restaurant was good, or it would have been good if Marten had been perfectly at ease. Fortunately, he was freed of the necessity of carrying the burden of the conversation. Naylor talked rapidly and loudly, glanced over the menu with a practiced eye, recommended the Eggs Benedict, and commented on the weather and the miserable traffic situation.

On occasion, Marten tried to snap out of it, to lose that edge of fuzzed absence of mind. But each time the restlessness would return. Something was wrong. The name was wrong. It stood in the way of what he had to do.

With main force, he tried to break through the madness. In sudden verbal clatter, he led the conversation into the subject of wiring. It was reckless of him. There was no proper foundation; the transition was too abrupt.

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But the lunch had been a good one; the dessert was on its way; and Naylor responded nicely.

He admitted dissatisfaction with existing arrangements. Yes, he had been looking into Marten's firm and, actually, it seemed to him that, yes, there was a chance, a good chance, he thought, that—

A hand came down on Naylor's shoulder as a man passed behind his chair. "How's the boy, Alex?"

Naylor looked up, grin ready-made and flashing. "Hey, Lefk, how's business?"

"Can't complain. See you at the—" He faded into the distance.

Marten wasn't listening. He felt his knees trembling, as he half-rose. "Who was that man?" he asked, intensely. It sounded more peremptory than he intended.

"Who? Lefk? Jerry Lefkovitz. You know him?" Naylor stared with cool surprise at his lunch companion.

"No. How do you spell his name?"

"L-E-F-K-O-V-I-T-Z, I think. Why?"

"With a V?"

"An F. . . . Oh, there's a V in it, too." Most of the good nature had left Naylor's face.

Marten drove on. "There's a Lefkowitz in the building. With a W. You know, Lef-COW-itz."

"Oh?"

"Room 701. This is not the same one?"

"Jerry doesn't work in this building. He's got a place across the street. I don't know this other one. This is a big building, you know. I don't keep tabs on everyone in it. What is all this, anyway?"

Marten shook his head and sat back. He didn't know what all this was, anyway. Or at least, if he did, it was nothing he dared explain. Could he say: I'm being haunted by all manner of Lefkowitzes today.

He said, "We were talking about wiring."

Naylor said, "Yes. Well, as I said, I've been considering your company. I've got to talk it over with the production boys, you understand. I'll let you know."

"Sure," said Marten, infinitely depressed. Naylor wouldn't let him know. The whole thing was shot.

And yet, through and beyond his depression, there was still that restlessness.

The hell with Naylor. All Marten wanted was to break this up and get on with it. (*Get on with what?* But the question was only a whisper. Whatever did the questioning inside him was ebbing away, dying down . . .)

The lunch frayed to an ending. If they had greeted each other like long-separated friends at last reunited, they parted like strangers.

Marten felt only relief.

He left with pulses thudding,

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threading through the tables, out of the haunted building, onto the haunted street.

Haunted? Madison Avenue at 1:20 P.M. in an early Fall afternoon with the sun shining brightly and ten thousand men and women bee-hiving its long straight stretch.

But Marten felt the haunting. He tucked his briefcase under his arm and headed desperately northward. A last sigh of the normal within him warned him he had a 3 o'clock appointment on 36th Street. Never mind. He headed uptown. Northward.

At 54th Street, he crossed Madison and walked west, came abruptly to a halt and looked upward.

There was a sign on the window, three stories up. He could make it out clearly: A. S. Lefkewich, Certified Accountant.

It had an F and an EW, but it was the first "-ich" ending he had seen. The first one. He was getting closer. He turned north again on Fifth Avenue, hurrying through the unreal streets of an unreal city, panting with the chase of something, while the crowds about him began to fade.

A sign in a ground floor window, M. R. Lefkowicz, M.D.

A small gold-leaf semi-circle of letters in a candy-store window: Jacob Levkow.

(Half a name, he thought savagely. Why is he disturbing me with half a name?)

The streets were empty now except for the varying clan of Lefkowitz, Levkowitz, Lefkowicz to stand out in the vacuum.

He was dimly aware of the park ahead, standing out in painted motionless green. He turned west. A piece of newspaper fluttered at the corner of his eyes, the only movement in a dead world. He veered, stooped and picked it up, without slackening his pace.

It was in Yiddish, a torn half-page.

He couldn't read it. He couldn't make out the blurred Hebrew letters, and could not have read it if they were clear. But one word was clear. It stood out in dark letters in the center of the page, each letter clear in its every serif. And it said Lefkovitsch, he knew, and, as he said it to himself, he placed its accent on the second syllable: Lef-KUH-vich.

He let the paper flutter away and entered the empty park.

The trees were still and the leaves hung in odd, suspended attitudes. The sunlight was a dead weight upon him and gave no warmth.

He was running, but his feet kicked up no dust and a tuft of grass on which he placed his weight did not bend.

And there on a bench was an old man; the only man in the deso-

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late park. He wore a dark felt hat, with a visor shading his eyes. From underneath it, tufts of gray hair protruded. His grizzled beard reached the uppermost button of his rough jacket. His old trousers were patched, and a strip of burlap was wrapped about each worn and shapeless shoe.

Marten stopped. It was difficult to breath. He could only say one word and he used it to ask his question: "Levkovich?"

He stood there, while the old man rose slowly to his feet; brown old eyes peering close.

"Marten," he sighed. "Samuel Marten. You have come." The words sounded with an effect of double exposure, for under the English, Marten heard the faint sigh of a foreign tongue. Under the "Samuel" was the unheard shadow of a "Schmu-el."

The old man's rough, veined hands reached out, then withdrew as though he were afraid to touch. "I have been looking but there are so many people in this wilderness of a city-that-is-to-come. So many Martins and Martines and Mortons and Mertons. I stopped at last when I found greenery, but for a moment only—I would not commit the sin of losing faith. And then you came."

"It is I," said Marten, and knew it was. "And you are Phinehas Levkovich. Why are we here?"

"I am Phinehas ben Jehudah, assigned the name Levkovich by the ukase of the Tsar that ordered family names for all. And we are here," the old man said, softly, "because I prayed. When I was already old, Leah, my only daughter, the child of my old age, left for America with her husband, left the knouts of the old for the hope of the new. And my sons died, and Sarah, the wife of my bosom, was long dead and I was alone. And the time came when I, too, must die. But I had not seen Leah since her leaving for the far country and word had come but rarely. My soul yearned that I might see sons born unto her; sons of my seed; sons in whom my soul might yet live and not die.

His voice was steady and the soundless shadow of sound beneath his words was the stately roll of an ancient language.

"And I was answered and two hours were given me that I might see the first son of my line to be born in a new land and in a new time. My daughter's daughter's daughter's son, have I found you, then, amidst the splendor of this city?"

"But why the search? Why not have brought us together at once?"

"Because there is pleasure in the hope of the seeking, my son," said the old man, radiantly, "and in the delight of the finding. I was given two hours in which I might seek, two hours in which I might

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find . . . and behold, thou art here, and I have found that which I had not looked to see in life." His voice was old, caressing. "Is it well with thee, my son?"

"It is well, my father, now that I have found thee," said Marten, and dropped to his knees. "Give me thy blessing, my father, that it may be well with me all the days of my life, and with the maid whom I am to take to wife and the little ones yet to be born of my seed and thine."

He felt the old hand resting lightly on his head and there was only the soundless whisper.

Marten rose.

The old man's eyes gazed into his yearningly. Were they losing focus?

"I go to my fathers now in peace, my son," said the old man, and Marten was alone in the empty park.

There was an instant of renewing motion, of the Sun taking up its interrupted task, of the wind reviving, and even with that first instant of sensation, all slipped back—

At ten of noon, Sam Marten hitched his way out of the taxicab, and found himself groping uselessly for his wallet while traffic inched on.

A red truck slowed, then moved on. A white script on its side announced: F. Lewkowitz and Sons, Wholesale Clothiers.

Marten didn't see it.

In future issues...

A look through the office cubbyholes reveals that we have a distinguished group of stories on hand for future issues — by such authors as:

CLIFFORD SIMAK

POUL ANDERSON

HOWARD FAST

PHILIP JOSE FARMER

MARK CLIFTON

ZENNA HENDERSON

EDWARD S. AARONS

ROBERT GRAVES

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Aldous Huxley's classic science fiction novel was set some 600 years A.F. (After Ford). "In 1931, when BRAVE NEW WORLD *was being written, I was convinced that there was still plenty of time . . ." Mr. Huxley now says in his new book,* BRAVE NEW WORLD REVISITED. *"Twenty-seven years later . . . I feel a good deal less optimistic . . ." He goes on brilliantly to consider some of his 1931 predictions in light of man's frightening progress in sharpening the tools and weapons of dictatorship, including such items as propaganda, brain-washing, sleep-teaching, and, in the chapter reprinted below, drugs.*

CHEMICAL PERSUASION

by Aldous Huxley

IN THE BRAVE NEW WORLD OF MY fable there was no whisky, no tobacco, no illicit heroin, no bootlegged cocaine. People neither smoked, nor drank, nor sniffed, nor gave themselves injections. Whenever anyone felt depressed or below par, he would swallow a tablet or two of a chemical compound called soma. The original soma, from which I took the name of this hypothetical drug, was an unknown plant (possibly *Asclepias acida*) used by the ancient Aryan invaders of India in one of the most solemn of their religious rites. The intoxicating juice expressed from the stems of this plant was drunk by the priests and nobles in the course of an elaborate ceremony. In the Vedic hymns we are told that the drinkers of soma were blessed in many ways. Their bodies were strengthened, their hearts were filled with courage, joy and enthusiasm, their minds were enlightened and in an immediate experience of eternal life they received the assurance of their immortality. But the sacred juice had its drawbacks. Soma was a dangerous drug — so dangerous that even the great sky-god Indra, was sometimes made ill by drinking it. Ordinary mortals might even die of an overdose. But the experience was so transcendently blissful and enlightening that soma drinking was regarded as a high privilege. For this privilege no price was too great.

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The soma of *Brave New World* had none of the drawbacks of its Indian original. In small doses it brought a sense of bliss, in larger doses it made you see visions and, if you took three tablets, you would sink in a few minutes into refreshing sleep. And all at no physiological or mental cost. The Brave New Worlders could take holidays from their black moods, or from the familiar annoyances of everyday life, without sacrificing their health or permanently reducing their efficiency.

In the Brave New World the soma habit was not a private vice; it was a political institution, it was the very essence of the Life, Liberty and Pursuit of Happiness guaranteed by the Bill of Rights. But this most precious of the subjects' inalienable privileges was at the same time one of the most powerful instruments of rule in the dictator's armory. The systematic drugging of individuals for the benefit of the State (and incidentally, of course, for their own delight) was a main plank in the policy of the World Controllers. The daily soma ration was an insurance against personal maladjustment, social unrest and the spread of subversive ideas. Religion, Karl Marx declared, is the opium of the people. In the Brave New World this situation was reversed. Opium, or rather soma, was the people's religion. Like religion, the drug had power to console and compensate, it called up visions of another, better world, it offered hope, strengthened faith and promoted charity. Beer, a poet has written,

. . . does more than Milton can
To justify God's ways to man.

And let us remember that, compared with soma, beer is a drug of the crudest and most unreliable kind. In this matter of justifying God's ways to man, soma is to alcohol as alcohol is to the theological arguments of Milton.

In 1931, when I was writing about the imaginary synthetic by means of which future generations would be made both happy and docile, the well-known American biochemist, Dr. Irvine Page, was preparing to leave Germany, where he had spent the three preceding years at the Kaiser Wilhelm Institute, working on the chemistry of the brain. "It is hard to understand," Dr. Page has written in a recent article, "why it took so long for scientists to get around to investigating the chemical reactions in their own brains. I speak," he adds, "from acute personal experience. When I came home in 1931 . . . I could not get a job in this field (the field of brain chemistry) or stir a ripple of interest in it." Today, twenty-seven years later, the non-existent ripple of 1931 has become a tidal wave of biochemical and psycho-

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pharmacological research. The enzymes which regulate the workings of the brain are being studied. Within the body, hitherto unknown chemical substances such as adrenochrome and serotonin (of which Dr. Page was a co-discoverer) have been isolated and their far-reaching effects on our mental and physical functions are now being investigated. Meanwhile new drugs are being synthesized—drugs that reinforce or correct or interfere with the actions of the various chemicals, by means of which the nervous system performs its daily and hourly miracles as the controller of the body, the instrument and mediator of consciousness. From our present point of view, the most interesting fact about these new drugs is that they temporarily alter the chemistry of the brain and the associated state of the mind without doing any permanent damage to the organism as a whole. In this respect they are like soma—and profoundly unlike the mind-changing drugs of the past. For example, the classical tranquillizer is opium. But opium is a dangerous drug which, from neolithic times down to the present day, has been making addicts and ruining health. The same is true of the classical euphoric, alcohol—the drug which, in the words of the Psalmist, "maketh glad the heart of man." But unfortunately alcohol not only maketh glad the heart of man; it also, in excessive doses, causes illness and addiction, and has been a main source, for the last eight or ten thousand years, of crime, domestic unhappiness, moral degradation and avoidable accidents.

Among the classical stimulants, tea, coffee and maté are, thank goodness, almost completely harmless. They are also very weak stimulants. Unlike these "cups that cheer but not inebriate," cocaine is a very powerful and a very dangerous drug. Those who make use of it must pay for their ecstasies, their sense of unlimited physical and mental power, by spells of agonizing depression, by such horrible physical symptoms as the sensation of being infested by myriads of crawling insects and by paranoid delusions that may lead to crimes of violence. Another stimulant of more recent vintage is amphetamine, better known under its trade name of Benzedrine. Amphetamine works very effectively — but works, if abused, at the expense of mental and physical health. It has been reported that, in Japan, there are now about one million amphetamine addicts.

Of the classical vision-producers the best known are the peyote of Mexico and the southwestern United States and *Cannabis sativa,* consumed all over the world under such names as hashish, bhang, kif and marihuana. According to the

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best medical and anthropological evidence, peyote is far less harmful than the White Man's gin or whisky. It permits the Indians who use it in their religious rites to enter paradise, and to feel at one with the beloved community, without making them pay for the privilege by anything worse than the ordeal of having to chew on something with a revolting flavor and of feeling somewhat nauseated for an hour or two. *Cannabis sativa* is a less innocuous drug —though not nearly so harmful as the sensation-mongers would have us believe. The Medical Committee, appointed in 1944 by the Mayor of New York to investigate the problem of marihuana, came to the conclusion, after careful investigation, that *Cannabis sativa* is not a serious menace to society, or even to those who indulge in it. It is merely a nuisance.

From these classical mind-changes we pass to the latest products of psychopharmacological research. Most highly publicized of these are the three new tranquillizers, reserpine, chlorpromazine and meprobamate. Administered to certain classes of psychotics, the first two have proved to be remarkably effective, not in curing mental illnesses, but at least in temporarily abolishing their more distressing symptoms. Meprobamate (alias Miltown) produces similar effects in persons suffering from various forms of neurosis. None of these drugs is perfectly harmless; but their cost, in terms of physical health and mental efficiency, is extraordinarily low. In a world where nobody gets anything for nothing tranquillizers offer a great deal for very little. Miltown and chlorpromazine are not yet soma; but they come fairly near to being one of the aspects of that mythical drug. They provide temporary relief from nervous tension without, in the great majority of cases, inflicting permanent organic harm, and without causing more than a rather slight impairment, while the drug is working, of intellectual and physical efficiency. Except as narcotics, they are probably to be preferred to the barbiturates, which blunt the mind's cutting edge and, in large doses, cause a number of undesirable psychophysical symptoms and may result in a full-blown addiction.

In LSD-25 (lysergic acid diethylamide) the pharmacologists have recently created another aspect of soma—a perception-improver and vision-producer that is, physiologically speaking, almost costless. This extraordinary drug, which is effective in doses as small as fifty or even twenty-five millionths of a gram, has power (like peyote) to transport people into the other world. In the majority of cases, the other world to which LSD-25 gives access is heavenly; alternatively it may be purgatorial

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or even infernal. But, positive or negative, the lysergic acid experience is felt by almost everyone who undergoes it to be profoundly significant and enlightening. In any event, the fact that minds can be changed so radically at so little cost to the body is altogether astonishing.

Soma was not only a vision-producer and a tranquillizer; it was also (and no doubt impossibly) a stimulant of mind and body, a creator of active euphoria as well as of the negative happiness that follows the release from anxiety and tension.

The ideal stimulant—powerful but innocuous—still awaits discovery. Amphetamine, as we have seen, was far from satisfactory; it exacted too high a price for what it gave. A more promising candidate for the role of soma in its third aspect is Iproniazid, which is now being used to lift depressed patients out of their misery, to enliven the apathetic and in general to increase the amount of available psychic energy. Still more promising, according to a distinguished pharmacologist of my acquaintance, is a new compound, still in the testing stage, to be known as Deaner. Deaner is an amino-alcohol and is thought to increase the production of acetyl-choline within the body, and thereby to increase the activity and effectiveness of the nervous system. The man who takes the new pill needs less sleep, feels more alert and cheerful, thinks faster and better—and all at next to no organic cost, at any rate in the short run. It sounds almost too good to be true.

We see then that, though soma does not yet exist (and will probably never exist), fairly good substitutes for the various aspects of soma have already been discovered. There are now physiologically cheap tranquillizers, physiologically cheap vision-producers and physiologically cheap stimulants.

That a dictator could, if he so desired, make use of these drugs for political purposes is obvious. He could ensure himself against political unrest by changing the chemistry of his subjects' brains and so making them content with their servile condition. He could use tranquillizers to calm the excited, stimulants to arouse enthusiasm in the indifferent, halluciants to distract the attention of the wretched from their miseries. But how, it may be asked, will the dictator get his subjects to take the pills that will make them think, feel and behave in the ways he finds desirable? In all probability it will be enough merely to make the pills available. Today alcohol and tobacco are available, and people spend considerably more on these very unsatisfactory euphorics, pseudostimulants and sedatives than they are ready to

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spend on the education of their children. Or consider the barbiturates and the tranquillizers. In the United States these drugs can be obtained only on a doctor's prescription. But the demand of the American public for something that will make life in an urban-industrial environment a little more tolerable is so great that doctors are now writing prescriptions for the various tranquillizers at the rate of forty-eight millions a year. Moreover, a majority of these prescriptions are refilled. A hundred doses of happiness are not enough: send to the drugstore for another bottle—and, when that is finished, for another . . . There can be no doubt that, if tranquillizers could be bought as easily and cheaply as aspirin, they would be consumed, not by the billions, as they are at present, but by the scores and hundreds of billions. And a good, cheap stimulant would be almost as popular.

Under a dictatorship pharmacists would be instructed to change their tune with every change of circumstances. In times of national crisis it would be their business to push the sale of stimulants. Between crises, too much alertness and energy on the part of his subjects might prove embarrassing to the tyrant. At such times the masses would be urged to buy tranquillizers and vision-producers. Under the influence of these soothing syrups they could be relied upon to give their master no trouble.

As things now stand, the tranquillizers may prevent some people from giving enough trouble, not only to their rulers, but even to themselves. Too much tension is a disease; but so is too little. There are certain occasions when we *ought* to be tense, when an excess of tranquillity (and especially of tranquillity imposed from the outside, by a chemical) is entirely inappropriate.

At a recent symposium on meprobamate, in which I was a participant, an eminent biochemist playfully suggested that the United States government should make a free gift to the Soviet people of fifty billion doses of this most popular of the tranquillizers. The joke had a serious point to it. In a contest between two populations, one of which is being constantly stimulated by threats and promises, constantly directed by one-pointed propaganda, while the other is no less constantly being distracted by television and tranquillized by Miltown, which of the opponents is more likely to come out on top?

As well as tranquillizing, hallucinating and stimulating, the soma of my fable had the power of heightening suggestibility, and so could be used to reinforce the effects of governmental propaganda. Less effectively and at a higher physiological cost, several

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drugs already in the pharmacopoeia can be used for the same purpose. There is scopolamine, for example, the active principle of henbane and, in large doses, a powerful poison; there are pentothal and sodium amytal. Nicknamed for some odd reason "the truth serum," pentothal has been used by the police of various countries for the purpose of extracting confessions from (or perhaps suggesting confessions to) reluctant criminals. Pentothal and sodium amytal lower the barrier between the conscious and the subconscious mind and are of great value in the treatment of "battle fatigue" by the process known in England as "abreaction therapy," in America as "narcosynthesis." It is said that these drugs are sometimes employed by the Communists, when preparing important prisoners for their public appearance in court.

Meanwhile pharmacology, biochemistry and neurology are on the march, and we can be quite certain that, in the course of the next few years, new and better chemical methods for increasing suggestibility and lowering psychological resistance will be discovered. Like everything else, these discoveries may be used well or badly. They may help the psychiatrist in his battle against mental illness, or they may help the dictator in his battle against freedom. More probably (since science is divinely impartial) they will both enslave and make free, heal and at the same time destroy.

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Herewith a pure science fiction story, including interplanetary travel, aliens, and allied matters . . . a pure, classic detective story (it first appeared in Ellery Queen's Mystery Magazine*) . . . an impure sort of Sherlock Holmes pastiche (that potassium permanganate-scented pipe tobacco!) . . . and a delightful entertainment.*

The Martian Crown Jewels

by Poul Anderson

THE SIGNAL WAS PICKED UP WHEN the ship was still a quarter million miles away, and recorded voices summoned the technicians. There was no haste, for the ZX28749, otherwise called the *Jane Brackney*, was right on schedule; but landing an unmanned spaceship is always a delicate operation. Men and machines prepared to receive her as she came down, but the control crew had the first order of business.

Yamagata, Steinmann, and Ramanowitz were in the GCA tower, with Hollyday standing by for an emergency. If the circuits *should* fail—they never had, but a thousand tons of cargo and nuclear-powered vessel, crashing into the port, could empty Phobos of human life. So Hollyday watched over a set of spare assemblies, ready to plug in whatever might be required.

Yamagata's thin fingers danced over the radar dials. His eyes were intent on the screen. "Got her," he said. Steinmann made a distance reading and Ramanowitz took the velocity off the Dopplerscope. A brief session with a computer showed the figures to be almost as predicted.

"Might as well relax," said Yamagata, taking out a cigarette. "She won't be in control range for a while yet."

His eyes roved over the crowded room and out its window. From the tower he had a view of the spaceport: unimpressive, most of

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its shops and sheds and living quarters being underground. The smooth concrete field was chopped off by the curvature of the tiny satellite. It always faced Mars, and the station was on the far side, but he could remember how the planet hung enormous over the opposite hemisphere, soft ruddy disc blurred with thin air, hazy greenish-brown mottlings of heath and farmland. Though Phobos was clothed in vacuum, you couldn't see the hard stars of space: the sun and the floodlamps were too bright.

There was a knock on the door. Hollyday went over, almost drifting in the ghostly gravity, and opened it. "Nobody allowed in here during a landing," he said. Hollyday was a stocky blond man with a pleasant, open countenance, and his tone was less peremptory than his words.

"Police." The newcomer, muscular, round-faced, and earnest, was in plain clothes, tunic and pajama pants, which was expected; everyone in the tiny settlement knew Inspector Gregg. But he was packing a gun, which was not usual.

Yamagata peered out again and saw the port's four constables down on the field in official spacesuits, watching the ground crew. They carried weapons. "What's the matter?" he asked.

"Nothing . . . I hope." Gregg came in and tried to smile. "But the *Jane* has a very unusual cargo."

"Hm?" Ramanowitz's eyes lit up in his broad plump visage. "Why weren't we told?"

"That was deliberate. Secrecy. The Martian crown jewels are aboard." Gregg fumbled a cigarette from his tunic.

Hollyday and Steinmann nodded at each other. Yamagata whistled. "On a robot ship?" he asked.

"Uh-huh. A robot ship is the one form of transportation from which they could not be stolen. There were three attempts made when they went to Earth on a regular liner, and I hate to think how many while they were at the British Museum. One guard lost his life. Now my boys are going to remove them before anyone else touches that ship and scoot 'em right down to Sabaeus."

"How much are they worth?" wondered Ramanowitz.

"Oh . . . they could be fenced on Earth for maybe half a billion UN dollars," said Gregg. "But the thief would do better to make the Martians pay to get them back . . . no, Earth would have to, I suppose, since it's our responsibility." He blew nervous clouds. "The jewels were secretly put on the *Jane*, last thing before she left on her regular run. I wasn't even told till a special messenger on this week's liner gave me the word. Not a chance for any thief to know they're here, till they're safely back on Mars. And that'll be *safe!*"

"Some people did know, all

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along," said Yamagata thoughtfully. "I mean the loading crew back at Earth."

"Uh-huh, there is that." Gregg smiled. "Several of them have quit since then, the messenger said, but of course, there's always a big turnover among spacejacks—they're a restless bunch." His gaze drifted across Steinmann and Hollyday, both of whom had last worked at Earth Station and come to Mars a few ships back. The liners went on a hyperbolic path and arrived in a couple of weeks; the robot ships followed the more leisurely and economical Hohmann A orbit and needed 258 days. A man who knew what ship was carrying the jewels could leave Earth, get to Mars well ahead of the cargo, and snap up a job here—Phobos was always shorthanded.

"Don't look at me!" said Steinmann, laughing. "Chuck and I knew about this—of course—but we were under security restrictions. Haven't told a soul."

"Yeah. I'd have known it if you had," nodded Gregg. "Gossip travels fast here. Don't resent this, please, but I'm here to see that none of you boys leaves this tower till the jewels are aboard our own boat."

"Oh, well. It'll mean overtime."

"If I want to get rich fast, I'll stick to prospecting," added Hollyday.

"When are you going to quit running around with that Geiger in your free time?" asked Yamagata. "Phobos is nothing but iron and granite."

"I have my own ideas about that," said Hollyday stoutly.

"Hell, everybody needs a hobby on this God-forsaken clod," declared Ramanowitz. "I might try for those sparklers myself, just for the excitement—" He stopped abruptly, aware of Gregg's eyes.

"All right," snapped Yamagata. "Here we go. Inspector, please stand back out of the way, and for your life's sake don't interrupt."

The *Jane* was drifting in, her velocity on the carefully precalculated orbit almost identical with that of Phobos. Almost, but not quite—there had been the inevitable small disturbing factors, which the remote-controlled jets had to compensate, and then there was the business of landing her. The team got a fix and were frantically busy.

In free fall, the *Jane* approached within a thousand miles of Phobos—a spheroid 500 feet in radius, big and massive, but lost against the incredible bulk of the satellite. And yet Phobos is an insignificant airless pill, negligible even beside its seventh-rate planet. Astronomical magnitudes are simply and literally incomprehensible.

When the ship was close enough, the radio directed her gyros to rotate her, very, very gently, until her pickup antenna was pointing directly at the field.

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Then her jets were cut in, a mere whisper of thrust. She was nearly above the spaceport, her path tangential to the moon's curvature. After a moment Yamagata slapped the keys hard, and the rockets blasted furiously, a visible red streak up in the sky. He cut them again, checked his data, and gave a milder blast.

"Okay," he grunted. "Let's bring her in."

Her velocity relative to Phobos's orbit and rotation was now zero, and she was falling. Yamagata slewed her around till the jets were pointing vertically down. Then he sat back and mopped his face while Ramanowitz took over; the job was too nerve-stretching for one man to perform in its entirety. Ramanowitz sweated the awkward mass to within a few yards of the cradle. Steinmann finished the task, easing her into the berth like an egg into a cup. He cut the jets and there was silence.

"Whew! Chuck, how about a drink?" Yamagata held out unsteady fingers.

Hollyday smiled and fetched a bottle. It went happily around. Gregg declined. His eyes were locked to the field, where a technician was checking for radioactivity. The verdict was clean, and he saw his constables come soaring over the concrete, to surround the great ship with guns. One of them went up, opened the manhatch, and slipped inside.

It seemed a very long while before he emerged. Then he came running. Gregg cursed and thumbed the tower's radio board. "Hey, there! Ybarra! What's the matter?"

The helmet set shuddered a reply: "Señor . . . Señor Inspector . . . the crown jewels are gone."

Sabaeus is, of course, a purely human name for the old city nestled in the Martian tropics, at the juncture of the "canals" Phison and Euphrates. Terrestrial mouths simply cannot form the syllables of High Chlannach, though rough approximations are possible. Nor did humans ever build a town exclusively of towers broader at the top than the base, or inhabit one for twenty thousand years. If they had, though, they would have encouraged an eager tourist influx; but Martians prefer more dignified ways of making a dollar, even if their parsimonious fame has long replaced that of Scotchmen. The result is that though interplanetary trade is brisk and Phobos a treaty port, a human is still a rare sight in Sabaeus.

Hurrying down the avenues between the stone mushrooms, Gregg felt conspicuous. He was glad the airsuit muffled him. Not that the grave Martians stared; they varkled, which is worse.

The Street of Those Who Prepare Nourishment in Ovens is a

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quiet one, given over to handicrafters, philosophers, and residential apartments. You won't see a courtship dance or a parade of the Lesser Halberdiers on it: nothing more exciting than a continuous four-day argument on the relativistic nature of the null class or an occasional gunfight. The latter are due to the planet's most renowned private detective, who nests here.

Gregg always found it eerie to be on Mars, under the cold deep-blue sky and the shrunken sun, among noises muffled by the thin oxygen-deficient air. But for Syaloch he had a good deal of affection, and when he had gone up the ladder and shaken the rattle outside the second-floor apartment and had been admitted, it was like escaping from nightmare.

"Ah, Krech!" The investigator laid down the stringed instrument on which he had been playing and towered gauntly over his visitor. "An unexbected bleassure to see hyou. Come in, my tear chab, to come in." He was proud of his English—but simple misspellings will not convey the whistling, clicking Martian accent.

The Inspector felt a cautious way into the high, narrow room. The glowsnakes which illuminated it after dark were coiled asleep on the stone floor, in a litter of papers, specimens, and weapons; rusty sand covered the sills of the Gothic windows. Syaloch was not neat except in his own person. In one corner was a small chemical laboratory. The rest of the walls were taken up with shelves, the criminological literature of three planets—Martian books, Terrestrial micros, Venusian talking stones. At one place, patriotically, the glyphs representing the reigning Nestmother had been punched out with bullets. An Earthling could not sit on the trapezelike native furniture, but Syaloch had courteously provided chairs and tubs as well; his clientèle was also triplanetary.

"I take it you are here on official but confidential business." Syaloch got out a big-bowled pipe. Martians have happily adopted tobacco, though in their atmosphere it must include potassium permanganate.

Gregg started. "How the hell do you know that?"

"Elementary, my dear fellow. Your manner is most agitated, and I know nothing but a crisis in your profession would cause that."

Gregg laughed wryly.

Syaloch was a seven-foot biped of vaguely storklike appearance. But the lean, crested, red-beaked head at the end of the sinuous neck was too large, the yellow eyes too deep; the white feathers were more like a penguin's than a flying bird's, save at the blue-plumed tail; instead of wings there were skinny red arms ending in four-fingered hands. And the overall

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posture was too erect for a bird.

Gregg jerked back to awareness. God in Heaven! The city lay gray and quiet; the sun was slipping westward over the farmlands of Sinus Sabaeus and the desert of the Aeria; he could just make out the rumble of a treadmill cart passing beneath the windows—and he sat here with a story which could blow the Solar System apart!

His hands, gloved against the chill, twisted together. "Yes, it's confidential, all right. If you can solve this case, you can just about name your own fee." The gleam in Syaloch's eyes made him regret that, but he stumbled on: "One thing, though. Just how do you feel about us Earthlings?"

"I have no prejudices. It is the brain that counts, not whether it is covered by feathers or hair or bony plates."

"No, I realize that. But some Martians resent us. We do disrupt an old way of life—we can't help it, if we're to trade with you—"

"*K'teh.* The trade is on the whole beneficial. Your fuel and machinery—and tobacco, yesss—for our kantz and snull. Also, we were getting too . . . stale. And of course space travel has added a whole new dimension to criminology. Yes, I favor Earth."

"Then you'll help us? And keep quiet about something which could provoke your planetary federation into kicking us off Phobos?"

The third eyelids closed, making the long-beaked face a mask. "I give no promises yet, Gregg."

"Well . . . damn it, all right, I'll have to take the chance." The policeman swallowed hard. "You know about your crown jewels."

"They were lent to Earth for exhibit and scientific study."

"After years of negotiation. There's no more priceless relic on all Mars—and you were an old civilization when we were hunting mammoths. All right. They've been stolen."

Syaloch opened his eyes, but his only other movement was to nod.

"They were put on a robot ship at Earth Station. They were gone when that ship reached Phobos. We've damn near ripped the boat apart trying to find them—we did take the other cargo to pieces, bit by bit—and they aren't there!"

Syaloch rekindled his pipe, an elaborate flint-and-steel process on a world where matches won't burn. Only when it was drawing well did he suggest: "It is possible the ship was boarded en route?"

"No. It isn't possible. Every spacecraft in the System is registered, and its whereabouts are known at any time. Furthermore, imagine trying to find a speck in hundreds of millions of cubic miles, and match velocities with it . . . no vessel ever built could carry that much fuel. And mind you, it was never announced that the jewels were going back this way. Only the UN police and the

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Earth Station crew *could* know till the ship had actually left—by which time it'd be too late."

"Most interesting."

"If word of this gets out," said Gregg miserably, "you can guess the results. I suppose, we'd still have a few friends left in your Parliament—"

"In the House of Actives, yesss . . . a few. Not in the House of Philosophers, which is of course the upper chamber."

"It could mean a twenty-year hiatus in Earth-Mars traffic — maybe a permanent breaking off of relations. Damn it, Syaloch, you've *got* to help me find those stones!"

"Hm-m-m. I pray your pardon. This requires thought." The Martian picked up his crooked instrument and plucked a few tentative chords. Gregg sighed.

The colorless sunset was past, night had fallen with the unnerving Martian swiftness, and the glowsnakes were emitting blue radiance when Syaloch put down the demifiddle.

"I fear I shall have to visit Phobos in person," he said. "There are too many unknowns for analysis, and it is never well to theorize before all the data have been gathered." A bony hand clapped Gregg's shoulder. "Come, come, old chap. I am really most grateful to you. Life was becoming infernally dull. Now, as my famous Terrestrial predecessor would say, the game's afoot . . . and a very big game indeed!"

A Martian in an Earthlike atmosphere is not much hampered, needing only an hour in a compression chamber and a filter on his beak to eliminate excess oxygen and moisture. Syaloch walked freely about the port clad in filter, pipe, and *tirstokr* cap, grumbling to himself at the heat and humidity.

He donned a spacesuit and went out to inspect the *Jane Brackney*. The vessel had been shunted aside to make room for later arrivals, and stood by a raw crag at the edge of the field, glimmering in the hard spatial sunlight. Gregg and Yamagata were with him.

"I say, you *have* been thorough," remarked the detective. "The outer skin is quite stripped off."

The spheroid resembled an egg which had tangled with a waffle iron: an intersecting grid of girders and braces above a thin aluminum hide. The jets, hatches, and radio mast were the only breaks in the checkerboard pattern, whose depth was about a foot and whose squares were a yard across at the "equator."

Yamagata laughed in a strained fashion. "No. The cops fluoroscoped every inch of her, but that's the way these cargo ships always look. They never land on Earth, you know, or any place where there's air, so streamlining would

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be unnecessary. And since nobody is aboard in transit, we don't have to worry about insulation or airtightness. Perishables are stowed in sealed compartments."

"I see. Now where were the crown jewels kept?"

"They were supposed to be in a cupboard near the gyros," said Gregg. "They were in a locked box, about six inches high, six inches wide, and a foot long." He shook his head, finding it hard to believe that so small a box could contain so much potential death.

"Ah . . . but *were* they placed there?"

"I radioed Earth and got a full account," said Gregg. "The ship was loaded as usual at the satellite station, then shoved a quarter mile away till it was time for her to leave—to get her out of the way, you understand. She was still in the same free-fall orbit, attached by a light cable—perfectly standard practice. At the last minute, without anyone being told beforehand, the crown jewels were brought up from Earth and stashed aboard."

"By a special policeman?"

"No. Only licensed technicians are allowed to board a ship in orbit, unless there's a life-and-death emergency. One of the regular station crew—fellow named Carter—was told where to put them. He was watched by the cops as he pulled himself along the cable and in through the manhatch." Gregg pointed to a small door near the radio mast. "He came out, closed it, and returned on the cable. The police immediately searched him and his spacesuit, just in case, and he positively did not have the jewels. There was no reason to suspect him of anything—good steady worker—though I'll admit he's disappeared since then. The *Jane* blasted a few minutes later and her jets were watched till they cut off and she went into free fall. And that's the last anyone saw of her till she got here—without the jewels."

"And right on orbit," added Yamagata. "If by some freak she had been boarded, it would have thrown her off enough for us to notice as she came in. Transference of momentum between her and the other ship."

"I see." Behind his faceplate, Syaloch's beak cut a sharp black curve across heaven. "Now then, Gregg, were the jewels actually in the box when it was delivered?"

"At Earth Station, you mean? Oh, yes. There are four UN Chief Inspectors involved, and HQ says they're absolutely above suspicion. When I sent back word of the theft, they insisted on having their own quarters and so on searched, and went under scop voluntarily."

"And your own constables on Phobos?"

"Same thing," said the policeman grimly. "I've slapped on an embargo—nobody but me has left

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this settlement since the loss was discovered. I've had every room and tunnel and warehouse searched." He tried to scratch his head, a frustrating attempt when one is in a spacesuit. "I can't maintain those restrictions much longer. Ships are coming in and the consignees want their freight."

"*Hnachla.* That puts us under a time limit, then." Syaloch nodded to himself. "Do you know, this is a fascinating variation of the old locked room problem. A robot ship in transit is a locked room in the most classic sense." He drifted off.

Gregg stared bleakly across the savage horizon, naked rock tumbling away under his feet, and then back over the field. Odd how tricky your vision became in airlessness, even when you had bright lights. That fellow crossing the field there, under the full glare of sun and floodlamps, was merely a stipple of shadow and luminance . . . what the devil was he doing, tying a shoe of all things? No, he was walking quite normally—

"I'd like to put everyone on Phobos under scop," said Gregg with a violent note, "but the law won't allow it unless the suspect volunteers—and only my own men have volunteered."

"Quite rightly, my dear fellow," said Syaloch. "One should at least have the privilege of privacy in his own skull. And it would make the investigation unbearably crude."

"I don't give a fertilizing damn how crude it is," snapped Gregg. "I just want that box with the Martian crown jewels safe inside."

"Tut-tut! Impatience has been the ruin of many a promising young police officer, as I seem to recall my spiritual ancestor of Earth pointing out to a Scotland Yard man who—hm—may even have been a physical ancestor of yours, Gregg. It seems we must try another approach. Are there any people on Phobos who might have known the jewels were aboard this ship?"

"Yes. Two men only. I've pretty well established that they never broke security and told anyone else till the secret was out."

"And who are they?"

"Technicians, Hollyday and Steinmann. They were working at Earth Station when the *Jane* was loaded. They quit soon after—not at the same time—and came here by liner and got jobs. You can bet that *their* quarters have been searched!"

"Perhaps," murmured Syaloch, "it would be worthwhile to interview the gentlemen in question."

Steinmann, a thin redhead, wore truculence like a mantle; Hollyday merely looked worried. It was no evidence of guilt—everyone had been rubbed raw of late. They sat in the police office, with Gregg behind the desk and Syaloch leaning against the wall, smoking and

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regarding them with unreadable yellow eyes.

"Damn it, I've told this over and over till I'm sick of it!" Steinmann knotted his fists and gave the Martian a bloodshot stare. "I never touched the things and I don't know who did. Hasn't any man a right to change jobs?"

"Please," said the detective mildly. "The better you help the sooner we can finish this work. I take it you were acquainted with the man who actually put the box aboard the ship?"

"Sure. Everybody knew John Carter. Everybody knows everybody else on a satellite station." The Earthman stuck out his jaw. "That's why none of us'll take scop. We won't blab out all our thoughts to guys we see fifty times a day. We'd go nuts!"

"I never made such a request," said Syaloch.

"Carter was quite a good friend of mine," volunteered Hollyday.

"Uh-huh," grunted Gregg. "And he quit too, about the same time you fellows did, and went Earthside and hasn't been seen since. HQ told me you and he were thick. What'd you talk about?"

"The usual." Hollyday shrugged. "Wine, women, and song. I haven't heard from him since I left Earth."

"Who says Carter stole the box?" demanded Steinmann. "He just got tired of living in space and quit his job. He *couldn't* have stolen the jewels—he was searched."

"Could he have hidden it somewhere for a friend to get at this end?" inquired Syaloch.

"Hidden it? Where? Those ships don't have secret compartments." Steinmann spoke wearily. "And he was only aboard the *Jane* a few minutes, just long enough to put the box where he was supposed to." His eyes smoldered at Gregg. "Let's face it: the only people anywhere along the line who ever had a chance to lift it were our own dear cops."

The Inspector reddened and half rose from his seat. "Look here, you—"

"We've got *your* word that you're innocent," growled Steinmann. "Why should it be any better than mine?"

Syaloch waved both men back. "If you please. Brawls are unphilosophic." His beak opened and clattered, the Martian equivalent of a smile. "Has either of you, perhaps, a theory? I am open to all ideas."

There was a stillness. Then Hollyday mumbled: "Yes. I have one."

Syaloch hooded his eyes and puffed quietly, waiting.

Hollyday's grin was shaky. "Only if I'm right, you'll never see those jewels again."

Gregg sputtered.

"I've been around the Solar System a lot," said Hollyday. "It gets lonesome out in space. You never know how big and lonesome it is

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till you've been there, all by yourself. And I've done just that—I'm an amateur uranium prospector, not a lucky one so far. I can't believe we know everything about the universe, or that there's only vacuum between the planets."

"Are you talking about the cobblies?" snorted Gregg.

"Go ahead and call it superstition. But if you're in space long enough . . . well, somehow, you *know*. There are beings out there—gas beings, radiation beings, whatever you want to imagine, there's *something* living in space."

"And what use would a box of jewels be to a cobbly?"

Hollyday spread his hands. "How can I tell? Maybe we bother them, scooting through their own dark kingdom with our little rockets. Stealing the crown jewels would be a good way to disrupt the Mars trade, wouldn't it?"

Only Syaloch's pipe broke the inward-pressing silence. But its burbling seemed quite irreverent.

"Well—" Gregg fumbled helplessly with a meteoric paperweight. "Well, Mr. Syaloch, do you want to ask any more questions?"

"Only one." The third lids rolled back, and coldness looked out at Steinmann. "If you please, my good man, what is your hobby?"

"Huh? Chess. I play chess. What's it to you?" Steinmann lowered his head and glared sullenly.

"Nothing else?"

"What else is there?"

Syaloch glanced at the Inspector, who nodded confirmation.

"I see. Thank you. Perhaps we can have a game sometime. I have some small skill of my own. That is all for now, gentlemen."

They left, moving like things in the haze of a dream through the low gravity.

"Well?" Gregg's eyes pleaded with Syaloch. "What next?"

"Very little. I think . . . yesss, while I am here I should like to watch the technicians at work. In my profession, one needs a broad knowledge of all occupations."

Gregg sighed.

Ramanowitz showed the guest around. The *Kim Brackney* was in and being unloaded. They threaded through a hive of space-suited men.

"The cops are going to have to raise that embargo soon," said Ramanowitz. "Either that or admit why they've clamped it on. Our warehouses are busting."

"It would be politic to do so," nodded Syaloch. "Ah, tell me . . . *is this equipment standard for all stations?*"

"Oh, you mean what the boys are wearing and carrying around? Sure. Same issue everywhere."

"May I inspect it more closely?"

"Hm?" *Lord, deliver me from visiting firemen!* thought Ramanowitz. He waved a mechanic over to him. "Mr. Syaloch would like

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you to explain your outfit," he said with ponderous sarcasm.

"Sure. Regular spacesuit here, reinforced at the seams." The gauntleted hands moved about, pointing. "Heating coils powered from this capacitance battery. Ten-hour air supply in the tanks. These buckles, you snap your tools into them, so they won't drift around in free fall. This little can at my belt holds paint that I spray out through this nozzle."

"Why must spaceships be painted?" asked Syaloch. "There is nothing to corrode the metal."

"Well, sir, we just call it paint. It's really gunk, to seal any leaks in the hull till we can install a new plate, or to mark any other kind of damage. Meteor punctures and so on." The mechanic pressed a trigger and a thin, almost invisible stream jetted out, solidifying as it hit the ground.

"But it cannot readily be seen, can it?" objected the Martian. "I, at least, find it difficult to see clearly in airlessness."

"That's right. Light doesn't diffuse, so . . . well, anyhow, the stuff is radioactive—not enough to be dangerous, just enough so that the repair crew can spot the place with a Geiger counter."

"I understand. What is the half-life?"

"Oh, I'm not sure. Six months, maybe? It's supposed to remain detectable for a year."

"Thank you." Syaloch stalked off. Ramanowitz had to jump to keep up with those long legs.

"Do you think Carter may have hid the box in his paint can?" suggested the human.

"No, hardly. The can is too small, and I assume he was searched thoroughly." Syaloch stopped and bowed. "You have been very kind and patient, Mr. Ramanowitz. I am finished now, and can find the Inspector myself."

"What for?"

"To tell him he can lift the embargo, of course." Syaloch made a harsh sibilance. "And then I must get the next boat to Mars. If I hurry, I can attend the concert in Sabaeus tonight." His voice grew dreamy. "They will be premiering Hanyech's *Variations on a Theme by Mendelssohn*, transcribed to the Royal Chlannach scale. It should be most unusual."

It was three days afterward that the letter came. Syaloch excused himself and kept an illustrious client squatting while he read it. Then he nodded to the other Martian. "You will be interested to know, sir, that the Estimable Diadems have arrived at Phobos and are being returned at this moment."

The client, a Cabinet Minister from the House of Actives, blinked. "Pardon, Freehatched Syaloch, but what have you to do with that?"

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"Oh . . . I am a friend of the Featherless police chief. He thought I might like to know."

"*Hraa.* Were you not on Phobos recently?"

"A minor case." The detective folded the letter carefully, sprinkled it with salt, and ate it. Martians are fond of paper, especially official Earth stationery with high rag content. "Now, sir, you were saying—?"

The parliamentarian responded absently. He would not dream of violating privacy—no, never—but if he had X-ray vision he would have read:

"Dear Syaloch,

"You were absolutely right. Your locked room problem is solved. We've got the jewels back, everything is in fine shape, and the same boat which brings you this letter will deliver them to the vaults. It's too bad the public can never know the facts—two planets ought to be grateful to you—but I'll supply that much thanks all by myself, and insist that any bill you care to send be paid in full. Even if the Assembly had to make a special appropriation, which I'm afraid it will.

"I admit your idea of lifting the embargo at once looked pretty wild to me, but it worked. I had our boys out, of course, scouring Phobos with Geigers, but Hollyday found the box before we did. Which saved us a lot of trouble, to be sure. I arrested him as he came back into the settlement, and he had the box among his ore samples. He has confessed, and you were right all along the line.

"What was that thing you quoted at me, the saying of that Earthman you admire so much? 'When you have eliminated the impossible, whatever remains, however improbable, must be true.' Something like that. It certainly applies to this case.

"As you decided, the box must have been taken to the ship at Earth Station and left there—no other possibility existed. Carter figured it out in half a minute when he was ordered to take the thing out and put it aboard the *Jane.* He went inside, all right, but still had the box when he emerged. In that uncertain light nobody saw him put it 'down' between four girders right next to the hatch. Or as you remarked, if the jewels are not *in* the ship, and yet not *away* from the ship, they must be *on* the ship. Gravitation would hold them in place. When the *Jane* blasted off, acceleration pressure slid the box back, but of course the waffle-iron pattern kept it from being lost; it fetched up against the after rib and stayed there. All the way to Mars! But the ship's gravity held it securely enough even in free fall, since both were on the same orbit.

"Hollyday says that Carter told him all about it. Carter couldn't go to Mars himself without being

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suspected and watched every minute once the jewels were discovered missing. He needed a confederate. Hollyday went to Phobos and took up prospecting as a cover for the search he'd later be making for the jewels.

"As you showed me, when the ship was within a thousand miles of this dock, Phobos gravity would be stronger than her own. Every spacejack knows that the robot ships don't start decelerating till they're quite close; that they are then almost straight above the surface; and that the side with the radio mast and manhatch—the side on which Carter had placed the box—is rotated around to face the station. The centrifugal force of rotation threw the box away from the ship, and was in a direction toward Phobos rather than away from it. Carter knew that this rotation is slow and easy, so the force wasn't enough to accelerate the box to escape velocity and lose it in space. It would have to fall down toward the satellite. Phobos Station being on the side opposite Mars, there was no danger that the loot would keep going till it hit the planet.

"So the crown jewels tumbled onto Phobos, just as you deduced. Of course Carter had given the box a quick radioactive spray as he laid it in place, and Hollyday used that to track it down among all those rocks and crevices. In point of fact, its path curved clear around this moon, so it landed about five miles from the station.

"Steinmann has been after me to know why you quizzed him about his hobby. You forgot to tell me that, but I figured it out for myself and told him. He or Hollyday had to be involved, since nobody else knew about the cargo, and the guilty person had to have some excuse to go out and look for the box. Chess playing doesn't furnish that kind of alibi. Am I right? At least, my deduction proves I've been studying the same canon you go by. Incidentally, Steinmann asks if you'd care to take him on the next time he has planet leave.

"Hollyday knows where Carter is hiding, and we've radioed the information back to Earth. Trouble is, we can't prosecute either of them without admitting the facts. Oh, well, there are such things as blacklists.

"Will have to close this now to make the boat. I'll be seeing you soon—not professionally, I hope!

Admiring regards,
Inspector Gregg"

But as it happened, the Cabinet minister did not possess X-ray eyes. He dismissed unprofitable speculation and outlined his problem. Somebody, somewhere in Sabaeus, was farniking the krats, and there was an alarming zaksnautry among the hyukus. It sounded to Syaloch like an interesting case.

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Horror stories are often called "Bedtime Stories," or "Tales To Be Read by Candlelight." Technically, the following might be so classed; we recommend, however, that it be read in full light of day....

Nightmare

by Jane Roberts

"THERE GOES JERUSALEM!" MARIAH yelled jubilantly and teetered from the broken mountain. Bits of arms and legs, fragments of towers and uprooted cities boiled around her. She stirred them crazily with the finger. Yells of horror escaped like steam sizzling.

"Robert, Robert, help me," she yelled. "Robert." She lunged out and found his arm. "Robert, what will happen first?"

The dream-Robert had square eyes filled with anguish. He said, "First we'll starve. We'll sleep more and more, and then never open our eyes. We'll bloat and float like balloons over the mountains."

"For God's sake, Mariah, wake up," the real Robert said. He switched on the light. Her eyes opened gratefully to see sane bedroom walls, but beyond them swept Jerusalem and New York dying quietly under the sea.

"Are you awake now?"

"Almost, almost." But a headless purple body lumbered by, propelled by wind and debris, and she screamed. Then the real Robert was shaking her, hard.

"Mariah, snap out of it. Mariah. It's all right." He crooned and held her in his arms. Bit by bit the images in her mind dissolved, but somewhere in the background of consciousness, she felt them gather to destroy her.

"There, are you o.k. now?" he asked, and she smiled to reassure him. But he switched the light back off, and she lay staring at the ceiling, fighting to stay awake. Should she ask him to put the light back on? Should she? No, no, she thought. He needed his sleep. He worked hard, hard . . .

Hard, and he was the dream-Robert now, pushing away the rubble and debris. She nursed the baby. He didn't suck very hard because he was dead. That didn't make any sense, because in the

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real world he wouldn't be born yet for two months. But the baby was here, and he was dead. She was getting hungry, and she staggered amid the broken towers finding only a dead bird to eat. The heat was unbearable.

"Robert, oh help me," she cried again, overwhelmed at the chaos. But there was no need begging or demanding, she could tell by his face.

"How did you know this would happen?" the dream-Robert asked, and her eyes grew hollow.

"I don't know. Maybe it's only a dream that means nothing." But the stench of decay was enough. "It really hasn't happened yet," she said, but something still would not let itself be known. Why was the baby dead? "Maybe it won't happen at all," she muttered, but the dream-Robert faded, and the real Robert said, "You're talking in your sleep, honey."

The words shocked her. She yelled, frantic now, "Wake me up! Wake me up!" knowing it was her last chance. She felt him shake her shoulders, and tried to open her eyes. But there was only a blurred image of his face, a distorted picture of bedroom walls, and suddenly it was the dream alone that was real.

"Robert it is going to happen. It is," she yelled out, but the real Robert faded. The room disappeared, and the sun was turning inward upon itself. As she felt its anger, the explosion of energy too long controlled, she knew, suddenly, why the baby was dead and tried to call out. But it was too late.

The heat slammed her against the nothingness that had been ground, beat upon her from the nothingness that had been sky. From far away, she was aware of the real Robert waking in the dim bedroom. She screamed, knowing he could not hear, and the last image her eyes held was his, shaking her body in its lace nightgown. When he cried, she no longer heard a thing.

Two months later, it made no difference. Nothing did.

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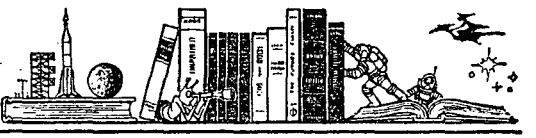
BOOKS



For the first several years of this magazine's life, the book column, Recommended Reading, *was written by the co-editors — Anthony Boucher and J. Francis McComas. A few years ago, Mr. McComas was compelled by the pressure of other business to resign from active participation, and the column was taken over by Mr. Boucher alone. It grieves us exceedingly to report that Mr. Boucher now finds it impossible to continue. We are hopeful that we will hear from him occasionally; in the meantime we have arranged for the column to be taken over by Damon Knight, author of the award-winning book of criticism,* IN SEARCH OF WONDER. *It is lamentable that Mr. Boucher must go—it is particularly gratifying that a reviewer of Mr. Knight's stature should be available to take his place....Good reading!*

Half Loaves

by Damon Knight

TOMORROW'S GIFT, by Edmund Cooper (Ballantine, 35¢), is a collection of short stories by a young British writer whose first novel, DEADLY IMAGE, was recently published by Ballantine. THE MONSTER FROM WORLD'S END, by Murray Leinster (Gold Medal, 35¢), is a new novel by the oldest pro in the business.

Either of these two books would do for a sample of what science fiction is like: yet put them side by side, and you wonder how one term can stretch to cover them both.

Leinster's story takes place on an island supply base a few hundred miles from the south polar continent, where a plane lands after suffering a mysterious catastrophe on its way from an Antarctic scientific outpost. The plane's passengers and crew turn

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out to have vanished in mid-flight, all but the pilot, who promptly shoots himself.

When an invisible something then begins attacking dogs and people, the question becomes: What sort of monster did the plane bring in its cargo? And how can it be stopped before it kills everybody on the island?

Leinster develops this situation methodically, in a workmanlike first-reader prose which has not changed much in the last thirty years. ("Splendid!" cries the American heroine.) The short, simple sentences carry the story forward in a sort of spiral fashion: one foot forward, two feet back to cover the old ground again, then another advance.

The strength of the story is in its careful technical background and its clear-headed Apollonian good sense. Leinster's basic premise is clearly stated in this book. It applies equally to everything he has written:

> In a real world, everything follows natural laws. Impossible things do not happen. There is an explanation for everything that does happen. The explanation links it to other things. There are no isolated phenomena. There are only isolated observations, and sometimes there are false observations. But everything real is rational.

A less rationalistic writer might have accepted the invisibility of the monster and gone on entertainingly from there: Leinster effectively debunks it. His subsequent exposure and explanation of the real monster is a model of watertight reasoning; it is also, except for a few effective moments, a little dull.

Leinster's carefully pedestrian narrative is overlong getting to its climax; the love story is unfortunately as clear-headed and reasonable as the rest; and above all, the reader can't help knowing all along that everything will be explained calmly, rationally, and in a little too much detail.

(This does not include the original mystery of the empty plane and the pilot's suicide, which is unsatisfactorily dealt with in the last chapter.)

The story has the form of a horror tale, but the horror seems curiously thin and artificial. The story's strongest kick is the purely cerebral pleasure of watching Leinster work his puzzle out. And it *is* a pleasure: but it isn't (for my taste) enough.

Edmund Cooper's basic premise is also spelled out clearly. In *The Butterflies*, one of the ten stories in his book, a character remarks:

"... To us, as to the primeval savages, the unknown is always a little magical – in spite of science, in spite of reason and in spite of infallible robots."

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These ten stories, widely varying in quality, have one persistent theme. They are about the irrational, the inexplicable, the wonderful and terrifying things that lie beneath the orderly surface of our universe. Cooper has the true mystic's vision, and can convey it with startling strength in a sentence or two. But the rational frameworks in which these glimpses occur are perfunctory, unconvincing, sometimes downright shoddy.

Cooper's heroes are as incapable as Leinster's of feeling any depth of emotion; but the effect is altogether different. Watching their machines blow up, organizing murder, contemplating their own unpleasant deaths, they have the frozen calm of nightmare.

Some of them are not people but points of view; all of them are symbols. And the curious result is that Cooper can get more onto his canvas than a realist can. The murder of the heroine in "Tomorrow's Gift," an event that would have to take up the whole foreground in a realistic story, is casually strung onto one of Cooper's elegant Elizabethan dialogues: it occurs suitably, and adds to the pattern, and the story goes on.

Two of the ten stories seem to me really lifeless and not worth reading. One, the title story, about a rebel facing lobotomy in a tranquilized version of *1984*, is a minor masterpiece. One, a rather conventional super-child story, is unexpectedly funny; and one more, about the ironic meeting of a criminal lunatic and two childlike explorers from another world, compels respect by its very grotesqueness.

The rest are mostly space-opera, with many evidences of careless and indifferent writing: but even these are partly redeemed by their endings. After a frantic comic-book brouhaha, Cooper will abruptly turn to a paragraph of calm description, say of a lunar landscape: and the hidden meaning of the story blooms.

All the same, this is to say that seven-eighths of a given story may be tripe; the proportion is too high.

We ought to be grateful for half loaves, and I think I am. But I thought it might be worth pointing out that sense and meaning are both important in science fiction; and that combining them in the same story is not an impossibility.

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Not yet 40, Frederik Pohl sold his first science fiction story over 20 years ago; he has been an active and important contributor to the field ever since, both as writer and editor.... Here he tells of 95-year-old Dr. Noah Sidorenko, the greatest mind since Einstein, whose now failing powers were once more desperately needed by mankind....

To See Another Mountain

by Frederik Pohl

Trucks were coming up the side of the mountain again. The electric motors were quiet enough, but these were heavy-duty trucks and the reduction gears could be heard a mile off. A mile by air; that was eighteen miles by the blacktop road that snaked up the side of the mountain, all hairpin curves with banks that fell away to sheer cliffs.

The old man didn't mind the noise. The trucks woke him up when he was dozing, as he so often was these days. They gave a basing point to his days.

"You didn't drink your orange juice, Doctor."

The old man wheeled himself around in his chair. He liked the nurse. There were three who took care of him, on shifts, but Maureen Wrather was his personal favorite. She always seemed to be around when he needed her. He protested: "I drank most of it." The nurse waited. "All right." He drank it, noting that the flavor had changed again. What was it this time . . . stimulants, tranquilizers, sedatives, euphoriacs? They played him up and down like a yo-yo. "Do I get coffee this morning, Maureen?"

"Cocoa." She put the mug and a plate with two arrowroot cookies down on the table, avoiding the central space where he laid out his endless hands of solitaire; that was one of the things the old man liked about her. "I have to get you dressed in half an hour," she announced, "because company's coming."

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"Company? Who would be coming to see me?" But he could see from the look in her light, cheerful eyes, even before she spoke, that it was a surprise. Well, thought the old man with dutiful pleasure, that was progress, only a few weeks ago they wouldn't have permitted him any surprises at all. Weeks? He frowned. Maybe months. All the days were like all the other days. He could count one, yesterday; two, the day before; three, last week—he could count a few simple intervals with confidence, but the ancient era of a month ago was a wash of gray confusion. He sighed. That was the price you paid for being crazy, he thought with amusement. They made it that way on purpose, to help him "get well." But it had all been gray and bland enough anyhow. Back *very* far ago there had been a time of terror, but after that it had been bland for a long, long time.

"Drink your cocoa, young fellow," the nurse winked, cheerfully flirting. "Do you want any music?"

That was a good game. "I want a lot of music," he said immediately. "Stravinsky—that *Sac* thing, I think. And Alben Berg. And—I know. Do you have that old one, *The Three Itta Fishies*?" He had been very pleased with the completeness of the tape library in the house on the hill, until he found out that there was something in that orange juice too. Every request of his was carefully noted and analyzed. Like the tiny microphones taped to throat and heart at night, his tastes in music were data in building up a picture of his condition. Well, that took some of the joy out of it, so the old man had added another joy of his own.

The nurse turned solemnly to the tape player. There was a pause, a faint marking *beep* and then the quick running opening bars of the wonderful Mendelssohn concerto, which he had always loved. He looked at the nurse. "You shouldn't tease us, Doctor," she said lightly as she left.

Dr. Noah Sidorenko had changed the world. His Hypothesis of Congruent Values, later expanded to his Theory of General Congruences, was the basis for a technology fully as complex and even more important than the nucleonics that had come from Einstein's energy-mass equation. This morning the brain that had enunciated the principle of Congruence was occupied in a harder problem: What were the noises from the courtyard?

He was going to have his picture taken, he deduced from the evidence of the white soft shirt the nurse had laid out for him, the gray jacket and, above all, the tie. He almost never wore a tie. (The nurse seldom gave him one; he

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didn't like to speculate about the reasons for this.) While he was dressing, the trucks ground into the courtyard and stopped, and men's voices came clearly.

"I don't know who they are," he said aloud, abandoning the attempt to figure it out.

"They're the television crew," said the nurse from the next room. "Hush. Don't spoil your surprise."

He dressed quickly then, with excitement; why, it was a *big* surprise. There had never been a television crew on the mountain before. When he came out of the dressing room the nurse frowned and reached for his tie. "Sloppy! Why can't you large-domes learn how to do a simple knot?" She was a very sweet girl, the old man thought, lifting his chin to help. She could have been his daughter—even his grand-daughter. She was hardly twenty-five; yes, that would have been about right. His grand-daughter would have been about that now—

The old man frowned and turned his head away. That was very wrong. He didn't have a grand-child. He had had one son, no more, and the boy had died, so they had told the old man, in the implosion of the Haaroldsen Free Trawl in the Mindanao Deep. The boy had been nineteen years old, and certainly without children; and there had been something about his death, something that the old man didn't like to remember. He squinted. Worse than that, he thought, something he *couldn't* remember any more.

The nurse said: "Doctor, this is for you. It isn't much, but happy birthday."

She took a small pink-ribboned box out of the pocket of her uniform and handed it to him. He was touched. He saw his fingers trembling as he unwrapped the little package. That distracted him for a moment but then he dismissed it. It was honest emotion, that was all—well, and age too, of course. He was ninety-five. But it wasn't the worrying intention tremor that had disfigured the few episodes he could remember clearly, in his first days here on the Hill. It was only gratitude and sentiment.

And that was what the box held for him, sentiment. "Thank you, Maureen. You're good to an old man." His eyes stung. It was only a little plastic picture-globe, with Maureen's young face captured smiling inside it, but it was for him.

She patted his shoulder and said firmly: "You're a good man. And a beautiful one, too, so come on and let's show you off to your company."

She helped him into the wheelchair. It had its motors, but he liked to have her push him and she humored him. They went out the door, down the long sunlit corridors that divided the guest

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rooms in the front of the building from the broad high terrace behind. Sam Krabbe, Ernest Atkinson and a couple of the others from the Group came to the doors of their rooms to nod, and to wish the old man a happy birthday. Sidorenko nodded back, tired and pleased. He listened critically to the thumping of his heart—excitement was a risk, he knew—and then grinned. He was getting as bad as the doctors.

Maureen wheeled the old man onto the little open elevator platform. They dropped, quickly and smoothly on magnetic cushions, to the lower floor. The old man leaned far over the side of his chair, studying what he could see of the elevator, because he had a direct and personal interest in it. Somebody had told him that the application of magnetic fields to non-ferrous substances was a trick that had been learned from his General Congruences. Well, there was this much to it: Congruence showed that all fields were related and interchangeable, and there was, of course, no reason why what was possible should not be made what is *so*. But the old man laughed silently inside himself. He was thinking of Albert Einstein confronted with a photo of *Enola Gay*, or the *Nautilus* or himself trying to build the communications equipment that Congruence had made possible.

The nurse wheeled him out into the garden.

And there before him was the explanation of the morning's trucks.

A whole mobile television unit had trundled up those terrible roads. And a fleet of cars and, yes, that other noise was explained too, there was a helicopter perched on the tennis court, its vanes twisting like blown leaves in the breeze that came up the mountain. The helicopter had a definite meaning, the old man knew. Someone very important must have come up in it. The air space over the institute was closed off, by government order.

And reasoning the thing through, there was a logical conclusion; government orders can be set aside only by government executives, and—yes. *There* was the answer.

"Are you sure you're warm enough?" the nurse whispered. But Sidorenko hardly heard. He recognized the stocky blue-eyed man who stood chatting with one of the television crew. Sidorenko's contacts with the world around him were censored and small, but everyone would recognize *that* man. His name was Shawn O'Connor; he was the President of the United States.

The President was shaking his hand.

"Dear man," said President

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O'Connor warmly, "I can't tell you how great a pleasure this is for me. Oh, no. You wouldn't remember me. But I sat in on two of your Roose lectures. '98, it must have been. And after the second I went up and got your autograph."

The old man shook hands and let go. 1998? Good lord, that was close to fifty years ago. True, he thought, cudgeling his memory, not very many persons had ever asked for the autograph of a mathematical physicist, but that was an endless time past. He had no recollection whatever of the event. Still, he remembered the lectures well enough. "Oh, of course," he said. "In Leeds Hall. Well, Mr. President, I'm not certain but—"

"Dear man," the President said cheerfully, "don't pretend. Whatever later honors I have attained, as an engineering sophomore I was an utterly forgettable boy. You must have met a thousand like me. But," he said, standing straighter, "you, Dr. Sidorenko, are another matter entirely. Oh, yes. You are probably the greatest man our country has produced in this century, and it is only the smallest measure of the esteem in which we hold you that I have come here today. However," he added briskly, "we don't want to spoil things for the cameramen, who will undoubtedly want to get all this on tape. So come over here, Doctor, like a good fellow."

The old man blinked and allowed the cameraman to bully the President and himself into the best camera angles. One of them was whistling through his teeth, one was flirting with the nurse, but they were very efficient. The old man was trembling. All right, I'm ninety-five, I'm entitled to a little senility, he thought; but was it that? Something was worrying him, nagging at his mind.

"Go ahead, Mr. President," called the director at last, and Shawn O'Connor took from the hand of one of his alert, well-tailored men a blue and silver ribbon.

The camera purred faintly, adjusting itself to light and distance, and the President began to speak. "Dr. Sidorenko, today's investiture is one of the most joyous occasions that it has been my fortune—" Talk, talk, thought the old man, trying to listen, to identify the tune the cameraman had been whistling and to track down the thing that was bothering him all at once. He caught the President's merry blue eyes, now shadowed slightly as they looked at him, and realized he was trembling visibly.

Well, he couldn't *help* it, he thought resentfully. The body was shaking; the conscious mind had no control over it. He was ashamed and embarrassed, but even shame was a luxury he could

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only doubtfully afford. Something worse was very close and threatening to drown out mere shame, a touch of the crawling fear he had hoped never to feel again and had prayed not even to remember. He assumed a stiff smile.

"—of America's great men, who have received the honors due them. For this reason the Congress, by unanimous resolution of both Houses, has authorized me—"

The old man, chilled and shaking, remembered the name of the tune at last.

The bear went over the
mountain,
The bear went over the
mountain.
The bear went over the
mountain—
And what do you think he saw?

It worried him, though he could not say why.

"— not only your scientific achievements which are honored, Dr. Sidorenko, great though these are. The truths you have discovered have brought us close to the very heart of the universe. The great inventions of our day rest in large part on the brilliant insight you have given our scientific workers. But more than that—"

Oh, stop, whispered the old man silently to himself, and he could feel his body vibrating uncontrollably. The President faltered, smiled, shrugged and began again: "More than that, your humanitarian love for all mankind is a priceless—"

Stop, whispered the old man again, and realized with horror that he was not whispering at all. He was screaming. *"Stop!"* he bawled, and found himself trying with withered muscles to stand erect on his useless feet. *"Stop!"* The cameras deserted the President and swung in to stare, with three great glassy eyes, at the old man; and for old Siderenko terror struck in and fastened on him. Something erupted. Something exploding and bursting, like a crash of automobiles in flame; someone shouted near him with a voice that made him cringe. He saw the nurse run in with a hypodermic, and he felt its bite.

Endless hours later (though it took less than sixty seconds for the blood to pump the drug to his brain) he felt the falling, spiralling falling that he remembered from other needles at other times, and there was the one moment of clearness before sleep. Maureen was staring down at him, the needle still in her hand. "I'm sorry I spoiled the party, my dear," he whispered, his eyes closing, and then he was firmly asleep.

II

It really wasn't worth the trouble. Why should they want to

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waste so much effort on curing him?

The nurse fussed: "There's nothing to worry about, Doctor. A fine, big man like you. Sure you had a bad spell. What's that? Do you think the President himself has never had a bad spell?"

"Why don't they leave me alone, Maureen?" he whispered.

"Leave you alone, is it! And you with twenty good years inside of you."

"You're a good girl, Maureen," he said faintly, hoarding his strength. It was really more than they had a right to expect of him, he thought drowsily. He couldn't afford many blowups like this morning's, and it seemed they were always happening. Still, it was nice of the President.

He was a little more alert now, the effects of the needle, and its later measured balancing antidotes, beginning to wear off. This was Wednesday, he remembered. "Do I have to go in with the Group?" he whined.

"Doctor's orders, Doctor," she said firmly, "and doctor as you may be, you're not doctor enough to argue with doctor's orders." It was an old joke, limp to begin with, but he owed her a smile for it. He paid her, faintly.

After lunch she wheeled him into the Group meeting room. They were the last to arrive.

Sam Krabbe said, surly as always in the Group though he was pleasant enough in social contacts, outside: "You take a lot of hostility out on us, Sidorenko. Why don't you try being on time?"

"Sam forgets," said the Reynolds woman to the air. "It isn't up to Sidorenko, as long as he and Maureen act out that master-slave thing of having her push his chair. If she doesn't want to pay us the courtesy of promptness, Sidorenko can't help it." Marla Reynolds had murdered her husband and four teen-aged children; she had told the Group so at least fifty times. Sidorenko thought of her as the only legitimate lunatic the Group owned—except himself, of course; the old man kept an open mind about himself.

He struggled to hold his head up and his eyes open. You didn't get any benefit out of the Group's sessions unless you *participated.* The way to *participate* started with keeping the appearance of alertness and proceeded through talking (when you didn't really want to talk at all), to discharging emotion (when you were almost certain you had no emotion left to discharge). This he knew. Dr. Shugart had told him, in private analysis and again before the entire Group.

The old man sighed internally. Sam Krabbe could be relied on to interpret everyone's motives for them; he was doing it now. Short, squat, middle-aged . . . well, "middle-aged" by the standards of Dr.

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Sidorenko. Actually, Sam Krabbe was close to seventy. Sidorenko glanced up at the attentive, involved face of his nurse and let the conversation wash over him.

Sam: "What about that, Maureen? Do you have to focalize your aggressions on us? I'm getting damned sick and tired of it."

Nelson Amster took over (thirty-five years old, a bachelor, his life a chain of false steps and embarrassments because he saw his mother in every other female he met): "It's a stinking female attention-getting device, Sam. Ignore it."

Marla Reynolds: "That's fine talk from a panty-waist like you!"

Eddie Atkinson (glancing first at the bland face of Dr. Shugart for a cue): "Come on, you old harpies. Give the girl a break. What do you say, Dr. Shugart? Aren't they just displacing their own hostilities onto Maureen and the doctor?"

Dr. Shugart, after a moment's pause: "Mmm. Maureen, do you have a reaction to all this?"

Maureen, her eyes lively but her voice serious: "Oh, I'm sorry if I've made trouble. I didn't think we were late. Honestly. If there was any displacement it was certainly on the subconscious level. I *love* you all. I think you're the finest, friendliest Group I ever— And— Well, there just isn't any ambivalence at all. Honestly."

Dr. Shugart, nodding: "Mmm."

The old man turned restlessly in his chair. Pretty soon, he thought with a familiar and tolerable ache, they would all start looking at him and prodding him to *participate*. All but Dr. Shugart, anyway; the psychiatrist didn't believe in prodding, except in a minor emergency as a device to pass along the burden of talk from himself to one of the Group. (Though he always said he was part of the Group, not its master: "The analyst is only the senior patient. I learn much from our sessions.") But the others would prod, they had no such professional hesitations, and Sidorenko didn't like that. He was still turning over inside himself the morning's fiasco; true, he should voice it, that was what the Group was for; but the old man had learned in nearly a century to live his life his own certain way, and he wanted to think it out for himself first. The best way to keep the Group off him was to volunteer a small remark from time to time. He said at the first opportunity: "I'm sorry, ladies and gentlemen. I certainly didn't mean to upset you."

Everyone looked at him.

Ernie Atkinson scolded: "We're not here to apologize, Sidorenko. We only want you to know your *motives*."

Marla Reynolds: "One wonders if all of us know just why we *are*

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here? One wonders how the rest of us are to get proper help, if some of us get first crack at the doctor's attention because they are more *important.*"

Sidorenko said weakly: "Oh, Mrs. Reynolds — Marla — I'm sure there's nothing like that. Is there, Dr. Shugart?"

Dr. Shugart, pausing: "Mmm. Well, why *are* we here? Does anyone want to say?"

The old man opened his mouth and then closed it. Some evenings he joined with these youngsters in the Group, as demanding and competitive as any of them, but this was not one of the nights. Energy simply did not flow. Sidorenko was glad when Sam Krabbe took over the answer.

"We're here," said Sam pompously, "because we have problems which we haven't been able to solve alone. By Group sessions we help each other discharge our basic emotions where it is safe to do so, thus helping each other to reduce our problems to dimensions we can handle." He waited for agreement.

"Parrot!" smirked Ernie Atkinson.

"The doctor doesn't like our using pseudo-psychiatric doubletalk," Marla Reynolds accused the air.

"All right, let's see you do better!" Sam flared.

"Gladly! Easily!" cried Atkinson. He hooked a thumb in his lapel and draped a leg over the arm of the chair. "The institution is a place where very special and very concentrated help can be given to a very few." ("Snob," Nelson Amster hissed.) "I'm not a snob! It's the plain truth. We get broad-spectrum therapy here, everything from hormones to hypnosynthesis. And the reason we get it is that we *deserve* it. Everybody knows Dr. Sidorenko. Amster created a whole new industry with mergers and stock manipulations. Marla Reynolds is one of the greatest composers — well, the greatest woman composers — of the century." ("Damn some people!" grated Marla.) "And I myself—well, I need not go on. We are worth treating, all of us. At any cost. That's why the government put us in this very expensive place."

"Mmm," said Dr. Shugart, and considered for a moment. "I wonder," he said.

Ernie Atkinson suddenly shrank a good two sizes. His dark little face turned sallow. The leg slid off the arm of the chair. "What's that, Doc?" he asked dismally.

Dr. Shugart said: "I wonder if that's a *personal* motivation."

"Oh, I see," cried Atkinson, "it's what *each* of us is here for that's important, eh? Well, what about it? How about your motivations, Sidorenko?"

The old man coughed.

It always came to this, reliably.

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He would put out the weak decoy remarks but it did no good; one of the Group would pounce past the decoys to reach his flesh. Well, there was no fighting it.

"I—" he began, and stopped, and passed a hand over his face. Maureen was close beside him, her eyes warm and intent. "I know I shouldn't apologize," he apologized, "but it has been a bad day. You know about it. The thing is, I'm an old man, and even Dr. Shugart tells me that the old cells aren't in quite the shape they used to be. There was," he said mildly, as though he were reading off a dossier from a statistical sample, "a stroke a few years ago. Fortunately it limited itself; they're not operable, you know, when you get to a certain age. The blood vessels turn into a kind of rotten canvas and, although you can clamp off the hemorrhage, it only makes it pop open again on the other side of the clamp, and— I'm wandering. I apologize," he finished wryly, hoping they'd let him leave it at that.

"Mmm," Dr. Shugart said. "There's no such thing as totally undirected speech."

"Of course. All right. But that's why I apologize, because I'm not getting around very rapidly to an answer.

"I had my—trouble—a few years ago. I don't remember much about it, except that I gather I was delusional. Thought I was God, was the way it was expressed to me once. Well, if I had been a younger man I suppose I could have been treated more easily. I don't know. I'm not. Time was, I know, when most doctors wouldn't bother with a man of ninety-five, even if he did happen to be," he said wryly, "celebrated not only for his scientific attainments but for his broad love for mankind. I mean, there's a point of obsolescence. Might as well let the old fool die."

He choked and coughed raspingly for a second. The nurse reached for him, but he waved her off.

"Mmm," said Dr. Shugart.

And the nurse whispered in a hard bright voice: "I love you, Noah Sidorenko."

He sat up straight, suddenly struck to the heart.

"I love you," she said stubbornly, "and I'll *make* you get well. It can't hurt you if I tell you I love you. I'm not asking for anything. It's a free gift."

The old man swallowed.

"Don't argue with me, old sport," she said tenderly, and patted his creased cheek. "Now, how about some psychodrama? Let's do the big one! The slum you lived in, Doctor—remember? The night you were so scared. The accident. Stretch out," she ordered, wheeling him to a couch and helping him onto it. He went along, dazed. She scolded: "No, curl up more. You're four years

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old, remember? Marla, pull that chair over and be the mother. Ernie, Sam. Let's go out in the hall. We'll be cars speeding along the elevated highway outside the window. And let's make some noise! Honk, honk! Aoogal"

III

But it hadn't been like that at all, he told himself a few hours later, trying to go to sleep. It had been a big frightening experience in his childhood. Very possibly it was the thing that had caused his later troubles (though he couldn't remember the troubles well enough to be sure). But it was not what they were portraying in psychodrama. They were showing a frightened child, and the old man was stubbornly certain there was more to it than that. But very likely it was lost forever.

It was only natural that at his age of ninety-five a great many experiences should be lost forever. (Such as meeting a sophomore who asked for an autograph, when you could have had no idea that the sophomore would grow up to be President.)

He thought of the white man, wondered who the white man was, and shifted restlessly in the bed. He could feel his old muscles tensing up.

Curse the fool thing, the old man said to himself, referring to his own body; it has lost the knack of living. But it wasn't the body that was at fault, really. It was the brain. The body was only crepe and brittle sticks, true, but the heart still beat, blood flowed, stomach acids leached the building-blocks they needed from the food he ate. The body worked. But the brain worked against it; it was brain, not body, that tautened his muscles and shortened his breath.

That fantastic girl, the old man thought ruefully, she had said: *I love you.* Well. Let's interpret what she *meant,* he commanded; it could only have been an expression of the natural affection a nurse has for a patient. Still, it was ridiculous, the old man told himself, striving to catch a free and comfortable breath.

That was the worst thing about the tension. You couldn't breathe. With much effort, Noah Sidorenko wedged his elbows under him and raised his chest cage a trifle, not quite off the mattress, but resting lightly on it, relieving some of the pressure his shriveled body exerted. It helped, but it didn't help enough. He thought wistfully of free-fall. Rocket jockeys, he dreamed, floated endlessly with no pressure at all; how *deeply* they must be able to breathe! But, of course, he couldn't live to get there, not through rocket acceleration.

He was wandering, when he wanted most to think clearly.

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He turned on one side and pressed the tip of his nose lightly with a finger. Sometimes opening the nostrils wide helped to get a breath. He thought of what the microphones taped to rib and throat must be recording, and grinned faintly. Funny, though, he thought, that Maureen hadn't come in to check on him. The purpose of the microphones was to warn the nurse when he needed attention. Surely he needed attention now.

He listened critically to his thumping heart. Ka-*bump*, ka-*bump*, ka-*bump*. It made a little tune:

> The *bear* went *over* the *moun*-tain,
> The *bear* went *over* the *moun*-tain.

The song was very disturbing to him, though he did not even now know why. Somehow it was connected with that scene in his youth, the crashing cars and the white man. The old man sighed. He had come very close to remembering all of it once. They had put him in silence. "Silence" was an acoustically dead chamber, twenty feet cubed, hung with muffling fabric and strung with spiderwebs of felt; there was no echo and no sound from outside could come in. It was a conventional tool of study for mental disorders; strapped in a canvas cot, hung in the center of the cube, eyes closed, hearing deadened, a subject began very quickly to seek within himself. Fantasies came, delusions came. And ultimately knowledge came, if the subject could stand it; but three out of five reached hysteria before they reached any worthwhile insight, and the old man was one of the three. He had nearly died . . .

He paused to count the times he had nearly died under therapy of one kind or another, but it was too hard. And besides, he was beginning to think that he was nearly dying again. He pushed himself back on his elbows and fought once more for breath.

This one was very bad.

He slumped back on the bed and reached out for the intercom button. "Maureen," he whispered.

She slept in the room next to him, and though he seldom woke in the night—there was something in the evening cocoa to make sure of that—when it happened that he did, if he called, she was there promptly, sometimes in a pink wrapper, once or twice in lounging pajamas.

But not tonight. "Maureen," he whispered to the intercom again, but there was no answer.

The old man, with an effort, rolled onto his side. The movement dislodged one of the taped microphones. He felt it tear his skin and, simultaneously, heard the sharp alarm *ping* in Maureen's

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room. But the alarm didn't bring her.

The old man opened his eyes wide and stared at the intercom. "I have to get up," he told it reasonably, "because if I lie here, I think I will die."

It was impossible, of course. But what could he lose by trying? He pushed himself to the edge of the bed. The chair was within reach, but very remote to Noah Sidorenko, who had not stood on his own feet in years . . .

And then he was in the chair. Somehow he had made it! He sat erect and gasping, for a moment. The pain was bad, but it was better sitting up. Then his hand found the buttons of the little electric motors.

He spun slowly, navigated the straits between the nurse's desk and the corner of the bed, went out the door, as it opened quietly before him.

Maureen's room was empty. The outer door opened too. That was good, he thought; he hadn't been sure it would open; it was never very clear to him whether he was a prisoner or not. It was, after all, a sort of madhouse he was in . . .

The hall was empty and silent. He listened for the familiar *grunch, grunch* of Ernie Atkinson grinding his teeth in his sleep, but even that was stilled tonight. He rolled on. The lift rose silently to meet him.

He let it carry him gently down, and turned inward. The lower hall was blindingly bright. He made his way to Dr. Shugart's office.

He paused. There were voices.

No wonder he hadn't heard Ernie Atkinson's grinding teeth! Here was Atkinson, his voice coming plain as day: "I don't care what you say, we weren't getting through to him. No. The Group and psychodrama aren't working."

And Dr. Shugart's voice: "They *have* to work." Yes, the old man thought dazedly, it was Shugart's voice all right. But where was the hesitation, the carefully balanced non-committal air? It cracked sharp as a whip!

And Maureen's voice: "Do I have to go on building up this emotional involvement with him?"

Shugart crackled: "Is it so distasteful?"

"Oh, no!" (The old man sighed. He found he had stopped breathing until she answered.) "He's an old dear, and I *do* love him. But I'd like to give him little presents because I want to, not because it's part of his therapy."

Shugart rasped: "It's for his own good. This is one of the finest brains in the world, and it's falling apart. We've tried everything. Radical procedures—silence, psychosurgery, chemotherapy — are too much for him to take. Remember what happened when Dr. Reynolds tried electroshock? So we work with what we've got."

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The old man stirred.

Old he might be, and insane if they liked, but he wasn't going to linger out here and listen. A quarter after one in the morning, and the whole Institute was gathered here in Shugart's office, plotting the recovery of himself.

"All right," he gasped, rolling in, "what *is* this?"

They gaped at him.

"All of you!" he said strongly. "What are you doing to me? Is it a hoax?"

Shugart moved restlessly. Marla Reynolds reached up to pat her hair, avoiding his eyes.

"You, *Doctor* Reynolds? Want to explain? I mean—I mean," he said in a changed tone, no longer gasping, "there seems to be only one explanation. There's a conspiracy of some sort, and I'm the target."

Maureen got up and walked toward him. "Come in, Doctor," she said, in a voice of resignation tinged with pleasure. "Maybe it's better this way. We're not going to get very far continuing to lie to you, are we? So I guess we'll have to tell you the truth."

The tune rocked crazily through his head. The old man spun his chair and turned pleadingly to Maureen. "Of course, Doctor," she said, understanding without words, and fetched him a fizzy drink. "Only a little stimulant," she coaxed.

The old man glanced at Dr. Shugart. Shugart laughed. "Who do you think has been prescribing for you? There isn't a human being in the Institute without a first-rate degree. Maureen's our internist—*with*, of course, a thorough grounding in psychology."

The old man drank reproachfully, looking at Maureen. She said, clouding: "I know. It isn't fair, but we had to get you well."

"Why?"

Maureen said somberly: "A brain like yours doesn't come along too often. I'm not a physicist, but as I understand it, Congruence comes close to doing what Einstein tried with the unified field theory. You were on the point of doing something more when you— when you—"

"When I went crazy," the old man said crudely. She shook her head. "All right, I used a bad word. But that's it, isn't it?" The girl nodded. "I see."

But the stimulant wasn't doing much good. Ninety-five years, he thought confused, and perhaps I won't see that other mountain. It was hard to accept, hard to believe he had been hoaxed, hard to believe that it wasn't working, that the delusions would not be cured. "I'm flattered," he whispered hoarsely, and tried to hand the glass back to Maureen. It clattered to the floor and bounced without breaking. Marla with her schizoid detachment, Ernie with

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his worries, Sam Krabbe and his surly anger—doctors acting parts? The room swooped around Sidorenko; he was cut off from his reference points. And they were all afraid; he could see it, it was a gamble they had taken, that he would never find out, and now they didn't know what would happen. And he—

He didn't know either.

"I'm sorry to be so much trouble," he gasped.

"You mustn't feel personal guilt," Dr. Shugart said anxiously. "These personality disorders—personality *traits*—go with greatness. Sir Oliver Lodge swore he believed in levitation. Think of Newton, sleepless and paranoid. Religious mania is very common," the doctor assured him, "and you were spared that, at least. Well, almost—of course, certain aspects of your—"

"Shut up!" cried Maureen, and reached for the old man's wrist. He stared up at her, touched by the worry in her face, trying to find words to tell her there was nothing to worry about, nothing to fear. He felt his heart lunging against his ribs and his breathing seemed, oddly, to have stopped. He made a convulsive effort and drew an enormous loud breath. Why, that was almost—what did they call it?—a death rattle. He did it again.

"Doctor!" moaned the nurse, but he found the strength to shake his wrist free of her. This was interesting. He was beginning to remember something, or to imagine something—

They were all coming toward him.

"Leave me alone," he croaked. He held them off while he practiced breathing again; it wasn't hard; he could do it. He closed his eyes.

He heard Maureen catch her breath and opened them to glare at her, then closed them again.

IV

Noah Sidorenko's brain was perfectly lucid.

He saw—or remembered? But it was as though he were seeing it with an internal eye—all of his previous life, the childhood, the government office where he had received the first scholarship, the four professors quizzing him for his Doctor's, even the cloudy days of therapy and breakdown.

The old man thought: "It all began ninety years ago, I was all right until then . . ." and he had to laugh, though laughing choked him, because ninety years ago he had been all of five years old. But up until then there had been nothing to worry about.

Was it the crash? Yes. And fire. The white man. The song about the bear. The terrible auto smash, just outside his window—for his window had looked out on an elevated automobile highway in

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Brooklyn, the Gowanus Parkway, where cars raced bumper to bumper, fifty miles an hour, within five yards of the bed he slept in. *Whoosh. Whoosh.* All day long and all night. At night the strokes were slow, a lagging wirebrush riff; in the mornings and evenings they were faster, *whooshwhoosh-whoosh,* a quick rataplan. He listened to them and dreamed tunes around them. And there was the night he had gone to sleep and wakened screaming, screaming.

His mother rushed in – poor woman, she was already widowed. (Though she was only twenty-five, the old man thought with amazement. Twenty-five! Maureen was that.) She rushed in, and though the boy Noah was terrified he could see through the shadow of his own terror to hers. "Momma, momma, the white man!" She caught him in her arms. "Please, my God, what's the matter?" But he couldn't answer, except with sobs and incoherent words about the white man; it was a code, and she was not skilled to read it. And time passed, ten minutes or so. He was not comforted—he was still crying and afraid—but his mother was warm and she soothed him. She bounced him on her knee, ka-*bump,* ka-*bump,* and even though he was crying he remembered the song with that beat, *He SAW anOTHer MOUNTain, he SAW anOTHer MOUNTain,* and the cars whooshed by and in the next room the little TV set murmured and laughed. "You're missing your program, Momma," he said; "Go to sleep, dear," she answered; he was almost relaxed.

Crash. Outside the window two cars collided violently. A taxicab was bound for New York with a boy in a satin jacket at the wheel and four others crammed in the back; the boy at the wheel was high on marijuana and he hit the divider. The cab leaped crazily across into the Long Island-bound lane. There was not much traffic that night, but there was one car too many. In it a thirty-year old advertising salesman rushed to meet his wife and baby at Idlewild. He never met them. The cars struck. The stolen taxicab was hurled back into its own lane, its gas tank split, its doors flung open. Four boys in the jackets of the Gerritsen Tigers died at once and the fifth was thrown against the retaining wall—not dead; but with not enough life left to him to matter. He stood up and tried to run, and the burning gasoline made him a white-hot phantom, auraed and terrible. He lurched clear across the roadway to just outside Noah's window and died there, flaming, hanging over the wall, fifteen feet above the wreck of the space salesman's convertible.

"The white man!" screamed

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someone in Noah's room, but it was not the boy, it was his mother. She looked from the white-flamed man outside to her son, with eyes of fear and horror; and from then on it was never the same for him.

"From the time I was five," the old man said aloud, wondering, "it was never the same. She thought I was—I don't know. A devil. She thought I had the power of second sight, because I'd been scared by the accident before it happened."

He looked around the room. "And my son!" he cried. " I knew when he died—telepathy, at a distance of a good eight thousand miles. And—" he stopped, thinking. "There were other things," he mumbled. . . .

Dr. Shugart fussed kindly: "Impossible, don't you see? It's all part of your delusion. Surely a scientist should know that this—*witchcraft* can't be true! If only you hadn't come down here tonight, when you were so close to a cure. . . ."

Noah Sidorenko said terribly: "Do you want to cure me again?"

"Doctor!"

The old man shouted: "You've done it a hundred times, and a hundred times, with pain and fear, I've had to undo the cure—not because I want to! My *God,* no. But because I can't help myself. And now you want me to go through it again. . . . I won't let you cure me!"

He pushed the electric buttons; the chair began to spin but too slowly, too slowly. The old man fought his way to his feet, shouting at them. "Don't you see? I don't want to do this, but it does itself; it's like a baby that's getting born, I can't stop it now. It's *difficult* to have a baby. A woman in labor," he cried, seeing the worry in their eyes, knowing he must seem insane, "a woman in labor is having a fit, she struggles and screams—and what can a doctor do for her? Kill the pain? Yes, and perhaps kill the baby with it. That happened, over and over, until the doctors learned how, and—and you don't know how. . . .

"*You mustn't kill it this time!* Let me suffer. Don't cure me!"

And they stood there looking at him. No one spoke at all.

The room was utterly silent; the old man asked himself, Can I have convinced them? But that was so improbable. His words were such poor substitutes for the thoughts that raced about his thumping head. But—the thoughts, yes, they were clear now; maybe for the first time. He understood. Psionic power, telepathy, precognition, all the other hard-to-handle gifts that filled the gap between metaphysics and muscle . . . they lay next door to madness. Worse! By definition, they *were* "madness,"

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as a diamond can be "dirt" if it clogs the jet of a rocket. They were mad, since they didn't fit self-defining "sane" science.

But how many times he had come so close, all the same! And how often, how helpfully, he had been "cured." The delusional pattern had been so clear to "sane" science; and with insulin shock and hyposynthesis, with electrodes in his shaved scalp and psychodrama, with Group therapy and the silence—with every pill and incantation of the sciences of the mind they had, time after time, rooted out the devils. Precognition had been frightened out of him by his mother's panic. Telepathy had been electroshocked out of him in the Winford Retreat. But they returned and returned.

Handle them? No, the old man admitted, he couldn't handle them, not yet. But if God was good and gave him more time, an hour or two perhaps . . . or maybe some years; if the doctor was improperly kind and allowed him his "delusion"—why, he might learn to handle them after all. He might, for example, be able to peer into minds at will and not only when some randomly chosen mind, half-shattered itself, created such a clamorous beacon of noise that, then the (telepathically) nearly deaf might hear it. He might be able to stare into the future at will, instead of having his attention chance-caught by the flicker of some catastrophic terror projecting its shadow ahead. And this ancient and useless hulk that was his body, for example. He might yet force it to live, to move, to walk about, to stand—

To stand?

The old man stood perfectly motionless beside his chair. To stand? And then, rather late, he followed the direction of the staring eyes of Maureen and Shugart and the others.

He *was* standing.

But not as he had visioned it in wretched bedridden hours. He was standing tall and straight; but between the felt soles of his slippers and the rubber tiles of the office floor there were eight inches of untroubled air. . . .

No. They wouldn't cure him again, not ever. And with luck, he realized slowly, he might now proceed to infect the world.

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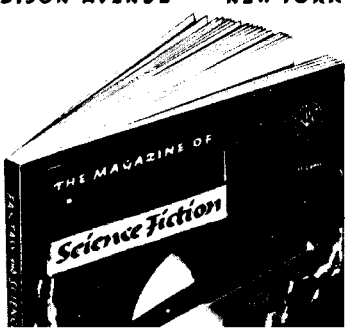

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